



Arlington Conservation Commission

Date: Thursday, November 6, 2025

Time: 7:00 PM

Location: Conducted by Remote Participation.

Please register in advance for this meeting. Reference materials, instructions, and access information for this specific meeting will be available 48 hours prior to the meeting on the Commission's agenda and minutes page. This meeting will be conducted in a remote format consistent with An Act Extending Certain COVID-19 Measures Adopted During the State of Emergency, which further extends certain COVID-19 measures regarding remote participation in public meetings until June 30, 2027. Please note: Not all items listed may in fact be discussed and other items not listed may be brought up for discussion to the extent permitted by law. This agenda includes those matters which can be reasonably anticipated to be discussed at the meeting.

Agenda

1. Administrative
 - a. Review Meeting Minutes.
 - b. Correspondence Received.
2. Discussion
 - a. Symmes Conservation Restriction Forest Management Plan.
 - b. Water Bodies Working Group.
 - c. CPA Committee Liaison.
 - d. Tree Committee Update.
3. Hearings

DEP #091-0372: Notice of Intent: 40 Park Avenue (Continued from 10/23/25).

DEP #091-0372: Notice of Intent: 40 Park Avenue (Continued from 10/23/25).

The Conservation Commission will hold a public hearing to consider a Notice of Intent to repair a loading dock at 40 Park Ave in Arlington. Areas proposed to be altered include the Riverfront Area and the Buffer Zone/Adjacent Upland Resource Area associated with Bank to Mill Brook.



Town of Arlington, Massachusetts

Correspondence Received.

Summary:

Correspondence Received.

ATTACHMENTS:

	Type	File Name	Description
▢	Reference Material	Correspondence_Received_- _Arlington_High_School_-_Jim_Feeney.pdf	Correspondence Received - Arlington High School - Jim Feeney.pdf
▢	Reference Material	Correspondence_Received_- _ACHS_Turf_Field_-_Beth_Melofchik.pdf	Correspondence Received - ACHS Turf Field - Beth Melofchik.pdf

From: [Jim Feeney](#)
To: jthielman@arlington.k12.ma.us; [David Morgan](#)
Cc: [Chuck Tirone](#); [Susan Chapnick](#); [Jackie Anderson](#); [Elizabeth Homan](#)
Subject: Re: FW: AHS Permit DEP #091-0323 - check up on Special Conditions
Date: Saturday, October 25, 2025 11:34:34 AM

Good morning David,

I just wanted to circle back to note that much of it is still in the works. With Phase 4 wrapping up, we expect many of the final submittals to begin with formal turnover to the Town.

I have just asked the Facilities Department to prepare the snow storage plan. The School Department presently only deploys plows and snowblowers for snow and ice management, but through the FF&E budget we are looking to provide a skid steer this winter to help with moving snow at the site.

Finally, I am happy to be connected directly for a discussion regarding 6-PPD quinone sampling. Separately, I have been in touch with Eurofins USA who can perform the lab analysis and am still trying to get quotes from local labs for the SVOC analysis. A few weeks ago after field turnover, the designer showed me where the dedicated access point is to facilitate sampling.

Talk soon-

Jim



James Feeney
Town Manager
Town of Arlington, MA
☐ 781-316-3010
☐ jfeeney@town.arlington.ma.us

Arlington values equity, diversity, and inclusion. We are committed to building a community where everyone is heard, respected, and protected.

From: Jeff Thielman <jthielman@arlington.k12.ma.us>
Sent: Wednesday, October 1, 2025 9:11 AM
To: David Morgan <dmorgan@town.arlington.ma.us>
Cc: Jim Feeney <jfeeney@town.arlington.ma.us>; Chuck Tirone <ctirone@ci.reading.ma.us>; Susan Chapnick <s.chapnick@comcast.net>; Jackie Anderson <jranderson@town.arlington.ma.us>; Elizabeth Homan <ehoman@arlington.k12.ma.us>
Subject: Re: FW: AHS Permit DEP #091-0323 - check up on Special Conditions

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.
Hi David

Thank you for the kind words about the bike connection. We're excited about it.

Jim Feeney, the design team, and I will connect and prepare an update to the points raised below.

Kind regards,
Jeff

On Tue, Sep 30, 2025 at 1:51 PM David Morgan <dmorgan@town.arlington.ma.us> wrote:

Hi Jeff and Jim,

Can you please let me know the status of the below items with regard to the Arlington High School Order of Conditions? I'm attaching a copy for easy reference.

Please also note Susan's offer below about the sampling and analysis protocol.

I passed through the site this afternoon on my way back from a site visit and things look good. The bike path connection is an excellent addition.

Cheers,
David

David Morgan | Environmental Planner + Conservation Agent | Department of Planning and Community Development | 781.316.3012

Arlington values equity, diversity, and inclusion. We are committed to building a community where everyone is heard, respected, and protected.

From: Susan D. Chapnick <s.chapnick@comcast.net>

Sent: Tuesday, September 30, 2025 1:05 PM

To: David Morgan <dmorgan@town.arlington.ma.us>; ConComm
<ConComm@town.arlington.ma.us>

Cc: Jackie Anderson <jranderson@town.arlington.ma.us>; Chuck Tirone
<ctirone@ci.reading.ma.us>

Subject: AHS Permit DEP #091-0323 - check up on Special Conditions

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

David,

Can you please check with the AHS Building Committee on the status of the following Special Conditions for the AHS Permit DEP #091-0323? These conditions require a submittal to the Conservation Agent/Commission and I want to make sure we keep on top of them.

#44 - Planting Monitoring Report

#47 - No Mow signage

#51 - Maintenance of stormwater structures

#52 - SWPPP inspection reporting

#53 - Snow storage plan

#59 & #60 - Protocol for sampling and testing stormwater discharge

#61 - Lab requirements
#62 - Lab report submittals

Please let me know if the AHS Building Committee would like me to make an introduction to Dr. Zhenyu Tien at Northeastern University, who is a leader in the field of 6PPD-quinone testing and might assist them in developing a sampling & analysis protocol -- and may agree to analyze the samples for no cost as part of his scientific investigations of artificial turf stormwater runoff. I am not sure of his capability to test for SVOCs - but there are many local labs who can do that.

Best,
Susan

Susan D. Chapnick, M.S.
Vice-Chair, Arlington Conservation Commission
s.chapnick@comcast.net

President & Principal Scientist, *retired*
NEH, Inc.
2 Farmers Cir
Arlington, MA 02474
www.neh-inc.com

David Morgan

From: Beth Melofchik <bethmelofchik@gmail.com>
Sent: Tuesday, November 4, 2025 4:20 PM
To: ConComm; Susan Chapnick
Cc: Runner; Robin Bergman; Jordan Weinstein
Subject: Catholic Artificial Turf field Arlington

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Is ConCom aware of major work on Summer Street field adjacent to Cookes Hollow?

Looks like they may be replacing the plastic grass.

Large machines, moving earth.

No sign of precautions to contain crumb rubber

Beth



Town of Arlington, Massachusetts

Symmes Conservation Restriction Forest Management Plan.

Summary:

Symmes Conservation Restriction Forest Management Plan.

ATTACHMENTS:

	Type	File Name	Description
▢	Reference Material	Symmes_Forest_Restoration_Plan_Outline_2025-10-27.pdf	Symmes Forest Restoration Plan Outline 2025-10-27.pdf

Arlington 360 Restoration Program

A project to reduce invasive plant species populations
and reintroduce a native ecosystem

Prepared for:

FHF I Arlington 360, LLC
Greystar
Town of Arlington, MA
&
The Citizens of Arlington, MA

Prepared by:

Daniel Cathcart, RCA, BCMA, MCA
Consulting Arborist
Plant Healthcare Consultants, Inc.
27 Kenilworth Road
Milton, MA 02186

October 2025

Ongoing Forest Restoration Program: Reclaiming an Invasive-Infested Forest

Objective: Restore the forest ecosystem by removing invasive species, promoting native biodiversity, and ensuring long-term ecological balance.

☐ Phase I: Assessment & Planning (Years 1-2)

- ☐ 1. Baseline Ecological Survey
- The survey was performed in the summer of 2023. As such, some data may not be 100% up-to-date but is considered accurate for this plan.

☒ A. Identify invasive and noxious species:

Common Name	Botanical Name	Planned Action
Boxelder	<i>Acer negundo</i>	Leave in place, remove selectively if appropriate
Wild Rose	<i>Rosa multiflora</i>	Containment ⇒ Suppression ⇒ Eradication
Poison Ivy	<i>Toxicodendron radicans</i>	Containment ⇒ Suppression ⇒ Eradication
Buckthorn	<i>Rhamnus cathartica</i>	Containment ⇒ Suppression ⇒ Eradication
Knotweed	<i>Fallopia japonica</i>	Containment ⇒ Suppression ⇒ Eradication
Tree of Heaven	<i>Ailanthus altissima</i>	Containment ⇒ Suppression ⇒ Eradication
Black Locust	<i>Robina pseudoacacia</i>	Containment ⇒ Suppression ⇒ Eradication
Norway Maple	<i>Acer platanoides</i>	Containment ⇒ Suppression with selective units to remain

[**Note About Norway Maples**](#)

☒ B. Identify non-invasive species:

Common Name	Botanical Name
Red Oak	<i>Quercus rubra</i>
White Oak	<i>Quercus alba</i>
Black Cherry	<i>Prunus serotina</i>
Black Oak	<i>Quercus velutina</i>
Shagbark Hickory	<i>Carya ovata</i>
Red Maple	<i>Acer rubrum</i>
White Pine	<i>Pinus strobus</i>

☒ C. Identify sample of targeted native species to plant (based on availability):

Common Name	Botanical Name
Red Oak	<i>Quercus rubra</i>
Swamp White Oak	<i>Quercus bicolor</i>
White Oak	<i>Quercus alba</i>
Red Maple	<i>Acer rubra</i>
Sugar Maple	<i>Acer saccharum</i>
White Pine	<i>Pinus strobus</i>
River Birch	<i>Betula nigra</i>
Jefferson Elm	<i>Ulmus americana</i>
White Spruce	<i>Picea glauca</i>
Shadblow Service Berry	<i>Amelanchier canadensis</i>

Winterberry	<i>Ilex verticillata</i>
Mt Laurel	<i>Kalmia latifolia</i>
Lowbush Blueberry	<i>Vaccinium angustifolium</i>
Highbush Blueberry	<i>Vaccinium corymbosum</i>

☐ D. Assess soil health, hydrology, and wildlife populations.

☐ 1. Soil

- ☒ ☐ ☐ ☐ ☐
 - ☐ a. Spec soil study
 - ☐ b. Secure vendor
 - ☐ c. Analyze results
 - ☐ d. Plan amendments/augmentation as needed

☐ 2. Hydrology

- ☒ ☐ ☐ ☐ ☐ ☐
 - ☐ a. Spec hydrology study
 - ☐ b. Secure vendor
 - ☐ c. Analyze results/determine needs
 - ☐ d. Assess available sources
 - ☐ e. Prescribe methods of supplemental watering

☐ 3. Wildlife

- ☒ ☐ ☐ ☐ ☐ ☐
 - ☐ a. Spec wildlife study
 - ☐ b. Research
 - ☐ c. Analyze results
 - ☐ d. Report results
 - ☐ e. Prescribe low-impact methodologies

☒ E. Maps areas of high invasion density.

☒ 1. Links to Invasive Density Maps

- ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒
 - ☐ a. Area delineation
 - ☐ b. Density of Entire Site
 - ☐ c. Density of Area 1
 - ☐ d. Density of Area 2
 - ☐ e. Density of Area 3
 - ☐ f. Density of Area 4
 - ☐ g. Density of Area 5

☐ 2. Develop Restoration Plans

☐ A. Short-Term - Planning (Years 1-2)

- ☒ ☒ ☐
 - ☐ 1. Goals ☐
 - ☐ 2. Finalize Specifications for Plans, Studies, Guidelines, and Executions Plans
 - ☐ 3. Attain Approval of All Facets of the Plan

☒ B. Mid-Term - Execution (Years 3-12)

- ☒ 1. Goals ☐



2. Invasive Species Removal



a. Specify removal goals and targets



b. Define removal practices



c. Determine execution plan



d. Create schedule & timeline for execution plan



e. Establish quarterly monitoring protocols



f. Create quarterly inspection field form



g. Establish annual monitoring protocols



3. Restoration Planting



a. Specify restoration planting goals, species selection, & density



b. Define planting practices



c. Determine execution plan



d. Create schedule & timeline for execution plan



e. Outline maintenance plan to ensure establishment



f. Establish quarterly monitoring protocols



g. Create quarterly inspection field form



g. Establish annual monitoring protocols



C. Long-Term-Adaptive Management/Ongoing Maintenance (Years 13+)



1. Goals



a. Specify goals of adaptive management/ongoing maintenance plan



2. Process



a. Define adaptive management process



b. Determine adaptive management execution plan



3. Community & Stakeholder Engagement



A. Develop a Community & Stakeholder Engagement Program



1. Identify Key Community Groups and Organizations



a. Compile a contact list of local conservation commissions, neighborhood associations, garden clubs, schools, and civic groups.



b. Initiate outreach to introduce project objectives, timelines, and anticipated community benefits.



c. Schedule informational meetings or site walks to gather stakeholder input and local ecological knowledge.



d. Integrate constructive feedback into the restoration and management plan.



2. Establish a Communication Framework



a. Create a contact and notification list for updates and volunteer opportunities.



b. Develop a feedback mechanism (email, online form, or meeting summary notes).



c. Maintain consistent updates through newsletters or a project web page.



B. Partner with Conservation Groups, Universities, and Local Agencies

- ☐
 - ☐ 1. Identify and Evaluate Potential Partnerships
 - a. Engage regional conservation trusts, watershed associations, cooperative extensions, and university ecology departments.
 - b. Determine available technical assistance, volunteers, or research support relevant to invasive species management and native restoration.
 - c. Research services and expertise offered (e.g., plant identification, GIS mapping, long-term monitoring).
 - ☐ 2. Formalize Collaboration
 - a. Contact organizational representatives to define potential roles and shared objectives.
 - b. Outline scopes of work, schedules, and coordination procedures.
 - c. Establish Memoranda of Understanding or informal partnership agreements as needed.
 - c. Plan deployment schedules for volunteer crews or research collaborations.
- ☐ C. Develop Educational and Outreach Components
 - ☐ 1. Design Educational Programming
 - a. Identify “teachable moments” throughout the project—such as invasive removal, soil restoration, and native planting events.
 - b. Create interpretive materials explaining ecological principles and project benefits (e.g., pollinator habitat, biodiversity, erosion control).
 - c. Host community planting days, restoration workshops, and guided ecology walks.
 - ☐ 2. Prepare Public-Facing Materials
 - a. Develop digital and print outreach materials highlighting goals, progress, and ecological outcomes.
 - b. Design and install on-site interpretive signage to explain restoration zones, plant species, and management methods.
 - c. Provide before-and-after visuals showing project progression.
 - d. Maintain clear messaging emphasizing the importance of sustained stewardship and invasive species prevention.
- ☐ D. Secure Funding and Grant Support
 - ☐ 1. Identify Funding Opportunities
 - a. Research applicable grant programs (state, federal, or private) for invasive species control, native restoration, and community engagement.
 - b. Track funding cycles, eligibility requirements, and reporting expectations.
 - ☐ 2. Manage Grant Development and Administration
 - a. Designate or contract a qualified grant writer or administrator.
 - b. Prepare and submit competitive applications aligned with project goals.
 - c. Upon award, coordinate procurement, compliance, and documentation in accordance with grant requirements.
 - d. Publicly acknowledge funding partners and outcomes to encourage continued support.
- ☐ E. Promote Long-Term Stewardship
 - a. Foster “Adopt-a-Plot” or community volunteer programs for maintenance and monitoring.
 - b. Train local stewards in invasive identification and native plant care.
 - c. Provide annual workshops to maintain engagement and knowledge transfer.

☐ Phase II: Invasive Species Removal & Restoration Execution (Years 3-12)

☐ 1.Targeted Invasive Species Removal

- ☒ A. Control Execution Plan
 - ☒ ▷ 1. 2026 Plan – Block A
 - ☒ ▷ 2. 2026 Plan Field Form – Block A

☐ 2.Reintroducing Native Species

- ☒ A. Planting Execution Plan
 - ☒ ▷ 1. 2027 Plan – Block A
 - ☒ ▷ 2. 2027 Plan Field Form – Block A

☐ 3.Soil & Water Restoration

- ☐ ▷ A. Soil Restoration Execution Plan
 - ☐ 1. Soil Improvement Actions
 - ☐ 2. Erosion & Sediment Control
 - ☐ 3. Soil Monitoring & Maintenance
- ☐ ▷ B. Water Restoration Execution Plan
 - ☐ 1. Water Management Actions
 - ☐ 2. Water Quality Protection
 - ☐ 3. Hydrologic Monitoring

☐ 4. Wildlife Habitat Support

- ☐ ▷ A. Habitat Design & Implementation
 - ☐ 1. Habitat Zoning
 - ☐ 2. Habitat Features
 - ☐ 3. Pollinator Support
 - ☐ 4. Wildlife Corridor Enhancement
 - ☐ 5. Monitoring & Adaptive Management
- ☐ B. Long-Term Habitat Stewardship
 - ☐ 1. Maintenance Schedule
 - ☐ 2. Community Integration

☐ Phase III: Ecosystem Stabilization & Management (Years 13 onward)

☐ 1.Adaptive Management & Continuous Monitoring

- ☐
- ☐

☐ 2.Forest Canopy Development

- ☐
- ☐

☐ 3.Community Involvement & Sustainable Practices

- ☐
- ☐
- ☐

☐ 4.Final Ecological Assessment

- ☐
- ☐
- ☐

Phase I

Assessment & Planning

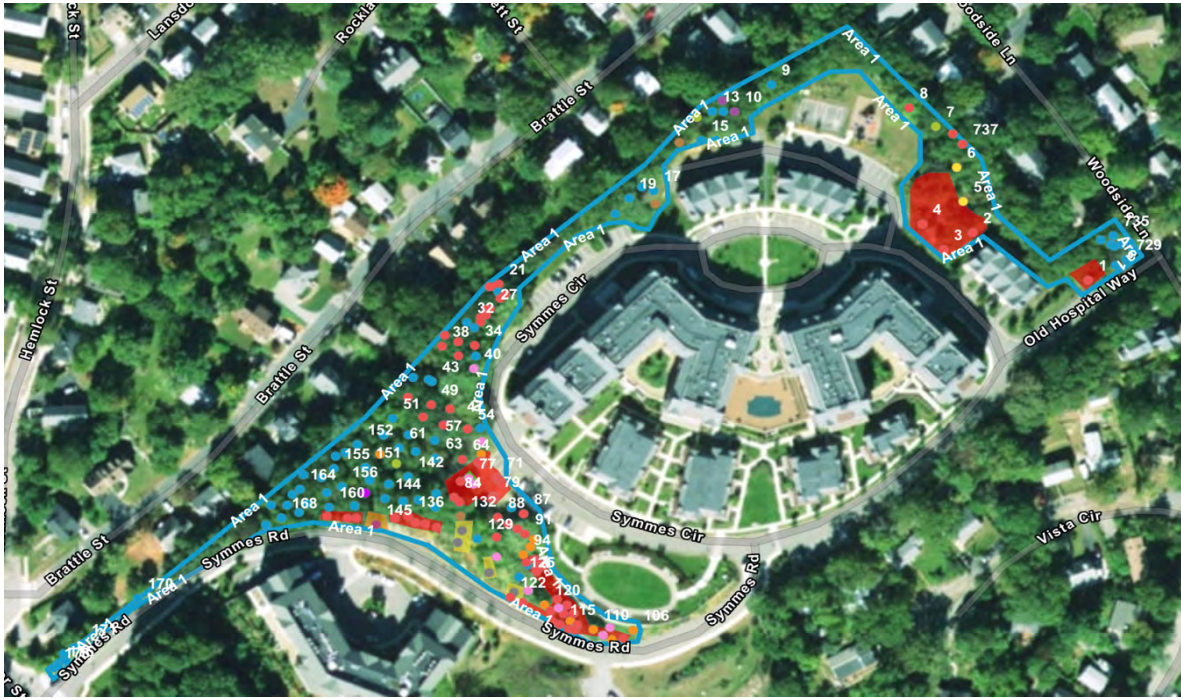
Master Area Divisions



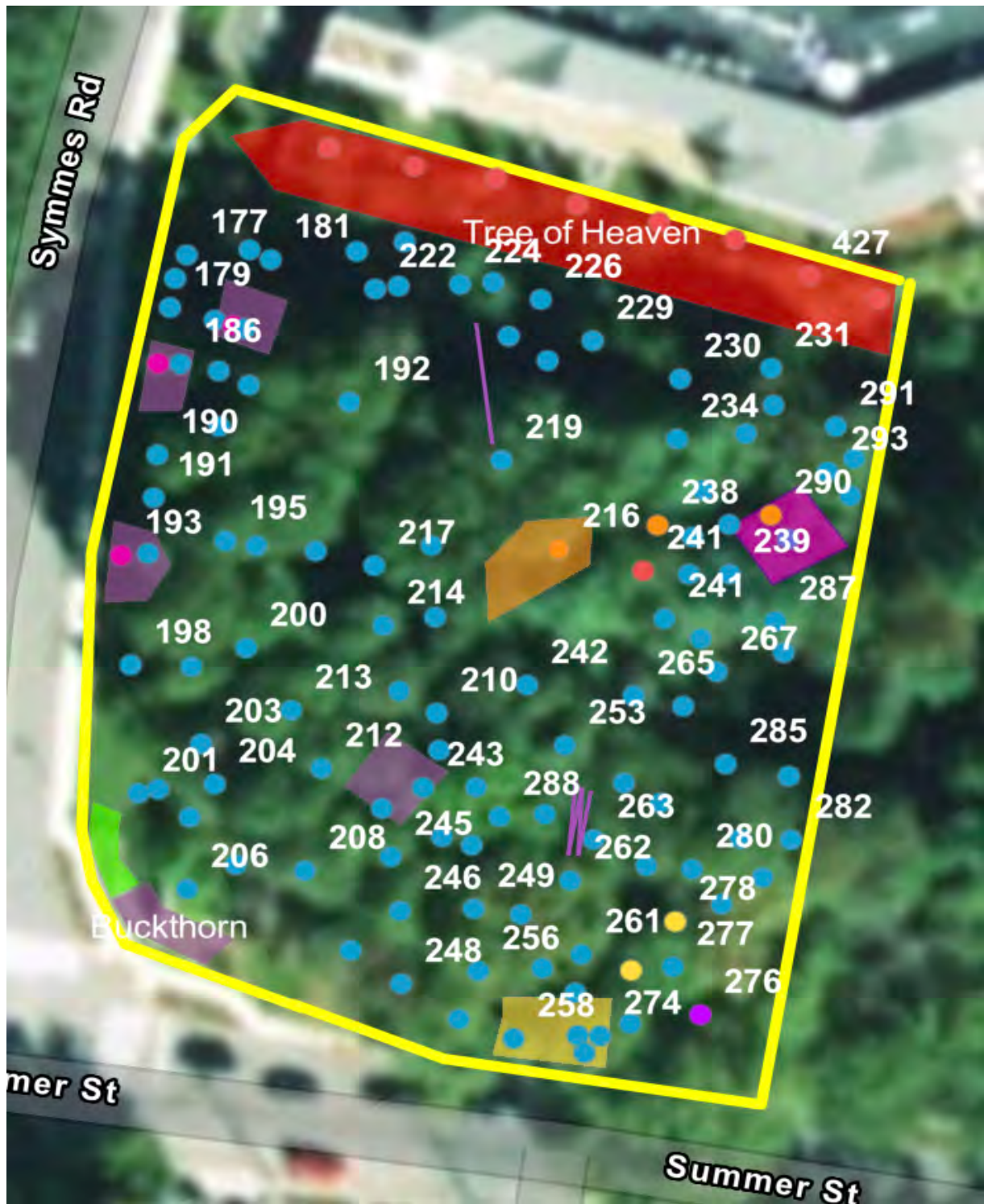
Invasive Species Density by Area



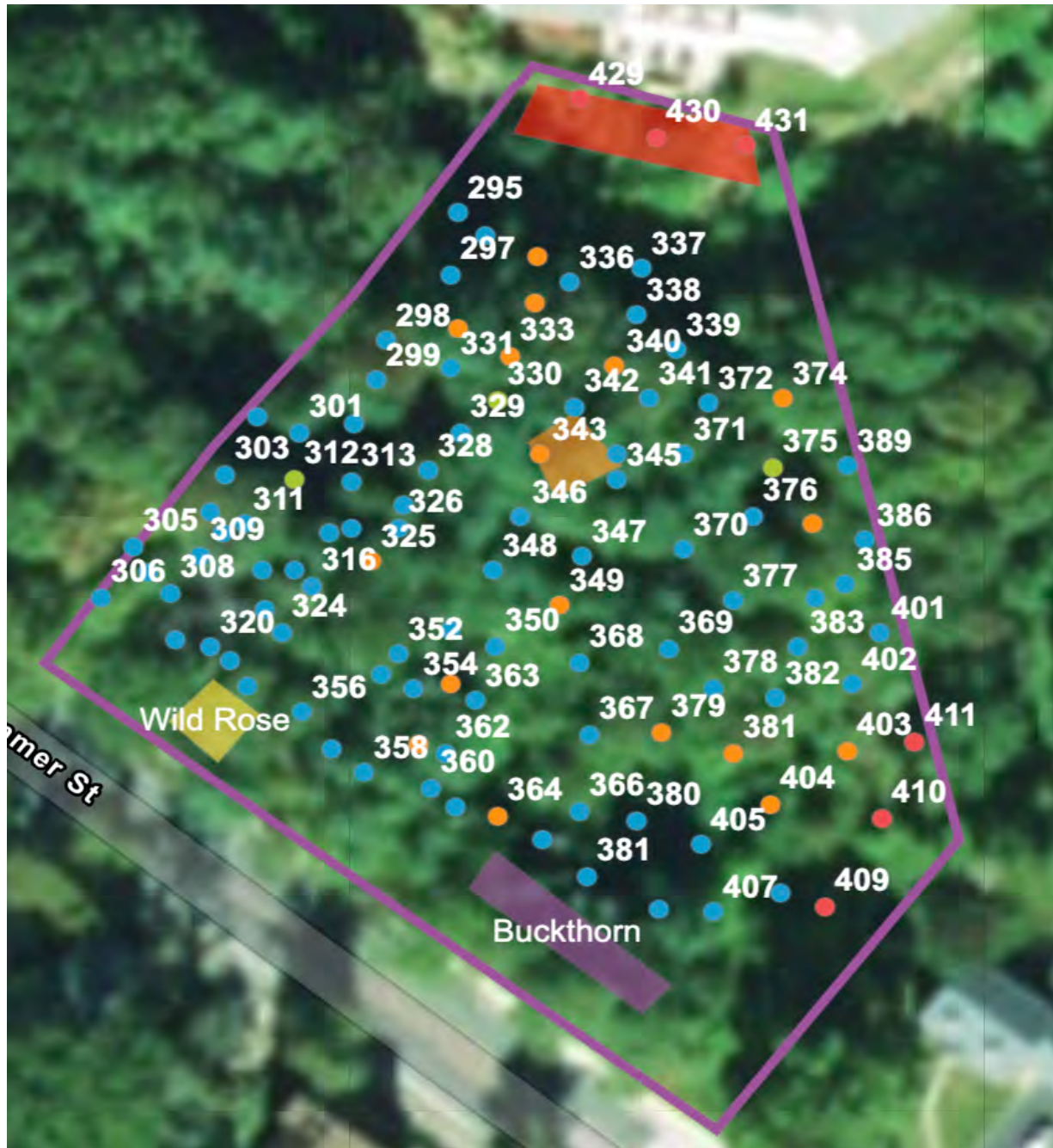
Area 1 Density



Area 2 Density



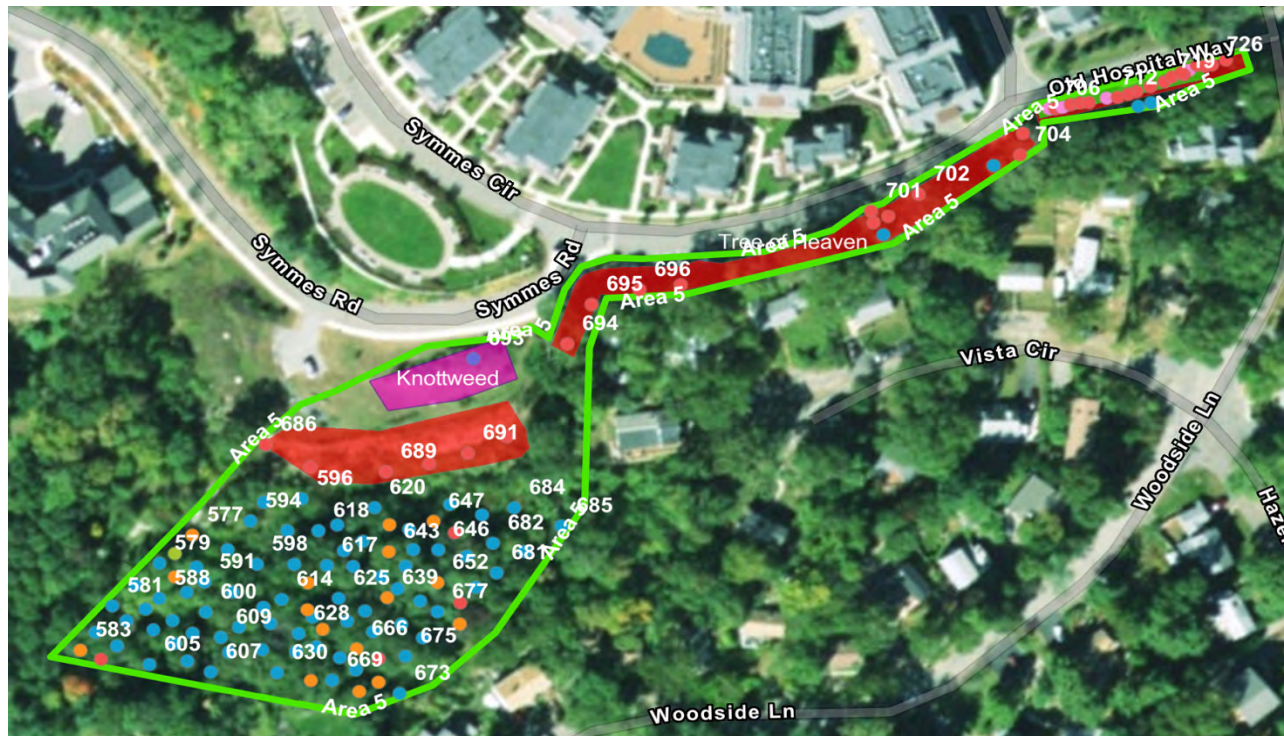
Area 3 Density



Area 4 Density



Area 5 Density



An argument against the classification of Norway maple (*Acer platanoides*) as an invasive species could be based on the following points:

1. Adaptability and Urban Benefits

Norway maples thrive in urban environments where many native species struggle due to pollution, compacted soil, and road salt. They provide valuable shade, reducing urban heat islands and improving air quality.

2. Lack of Severe Ecosystem Disruption

Unlike some highly invasive species that completely displace native vegetation (e.g., kudzu or garlic mustard), Norway maples primarily compete with other trees rather than eliminating entire ecosystems.

Some research suggests that native plants and trees can still coexist with Norway maples, particularly in well-managed forests.

3. Erosion Control and Soil Stability

These trees establish quickly and help prevent soil erosion in urban and disturbed environments.

Their extensive root systems can stabilize slopes and reduce runoff in areas where native trees may struggle.

4. Wildlife Benefits

While they may not support as many insects as native maples, they still provide habitat and food for various birds, pollinators, and small mammals.

Norway maple flowers provide an early nectar source for bees in spring.

5. Long History in Landscaping

Norway maples have been cultivated in North America since the 1700s, offering aesthetic beauty and serving as an alternative to native trees that may suffer from pests (e.g., sugar maples impacted by climate change and disease).

Their ability to grow in a variety of soil types makes them a resilient choice for homeowners and city planners.

6. Inconsistent Invasive Status

Not all regions classify Norway maple as invasive, and in some cases, their spread is limited by environmental factors.

Some areas report that they do not significantly outcompete native trees in well-balanced ecosystems.

Conclusion

While Norway maples do spread aggressively in some forests, they offer **urban benefits, erosion control, and adaptability** that make them a useful species in certain situations. Instead of outright removal, better **management strategies** (like selective thinning in forests) might be more appropriate than labeling them as purely invasive.

Soil Test Specifications

A. Purpose

The purpose of this soils study is to evaluate the physical, chemical, and biological characteristics of the soil within the subject site in order to determine conditions that may influence tree health, establishment, and long-term stability. Findings from this study will inform arboricultural recommendations regarding species selection, planting, maintenance, and management practices to support sustainable tree growth and reduce

B. Site Information

1. The location of the study will be limited to the Arlington 360 property. Sampling sites will coincide with the defined Areas 1-5
2. The site is predominately natural woodlands with excess of invasive species. A portion of the site abuts residential and developed areas. The terrain is varied with some areas with steep grade changes. The site was historically a nursery for Norway maples (*Acer nlatannoides*)
3. As some areas abut residential properties care and concern must be considered while accessing the site. Grade changes may make access challenging in places.

C. Field Procedure for Collection Samples

1. Equipment & Supplies

- a. Stainless steel auger or soil probe (1¼–2 in diameter)
- b. Disposable nitrile gloves
- c. Clean gallon plastic bags
- d. Permanent marker & waterproof labels
- e. GPS or measuring tape & flagging
- f. Chain-of-custody forms & field notebook

2. Sampling Locations & Density

At each sample site, four individual subsamples shall be collected within a 25-foot radius and

- a. composited into a single sample. Each designated area shall consist of five composite samples, each prepared from four subsamples as described
- b. Click for Sample Map Layout - (approximate locations, exact locations to be determined by field conditions).

[Entire Site](#)

[Area 1](#)

[Area 2](#)

[Area 3](#)

[Area 4](#)

[Area 5](#)

3. Each subsample should include soil from the surface to a depth of ~12 inches. Each subsample should measure approximately 1 cup. Each subsample will be combined and thoroughly mixed to produce a composite sample and stored in a plastic 1-quart storage bag.
4. Each composite sample bag should be numbered and marked with appropriate sample location. Documentation of each sample should be tabulate recorded for future analysis
5. Each composite sample location site should be flagged in the field and marked with the corresponding sample bag nomenclature.
6. Suggested nomenclature - A1-CS1, A2-CS3 where A=Area # and CS=Composite Sample #
7. Chain of Custody, Submission Tracking Form or similar for each composite sample should be filled out and used to submit to laboratory for testing.

D. Test Parameters for Laboratory Analysis

1. Physical Properties
 - a Texture (sand/silt/clay)
 - b Bulk density / compaction
 - c Structure and porosity
 - d Moisture content
 - e Permeability / infiltration rate
2. Chemical Properties
 - a pH
 - b Cation exchange capacity (CEC)
 - c Macronutrients (N, P, K, Ca, Mg, S)
 - d Micronutrients (Fe, Mn, Zn, Cu, B)
 - e Organic matter content
 - f Soluble salts / EC
3. Biological Properties (if relevant)
 - a Soil respiration
 - b Microbial biomass or activity
 - c Mycorrhizal colonization potential
4. Environmental / Site-Specific Tests (optional)
 - a Contaminants (heavy metals, hydrocarbons, pesticides)
 - b Rooting depth restrictions (hardpan, bedrock, water table).

E. Laboratory Method

Standard lab procedures as conducted by university extension services e.g., Umass, Uconn, tec.

F. Reporting Requirements for sampling Vendor

1. Maps showing sample locations.
2. Tables of lab results.
3. Soil profile descriptions (horizons, color, structure).
4. Interpretation relative to project goals (e.g., tree growth limitations, engineering suitability).
5. Recommendations (e.g., soil amendments, compaction mitigation, suitability for foundations).

Entire Area



Area 1



Area 2



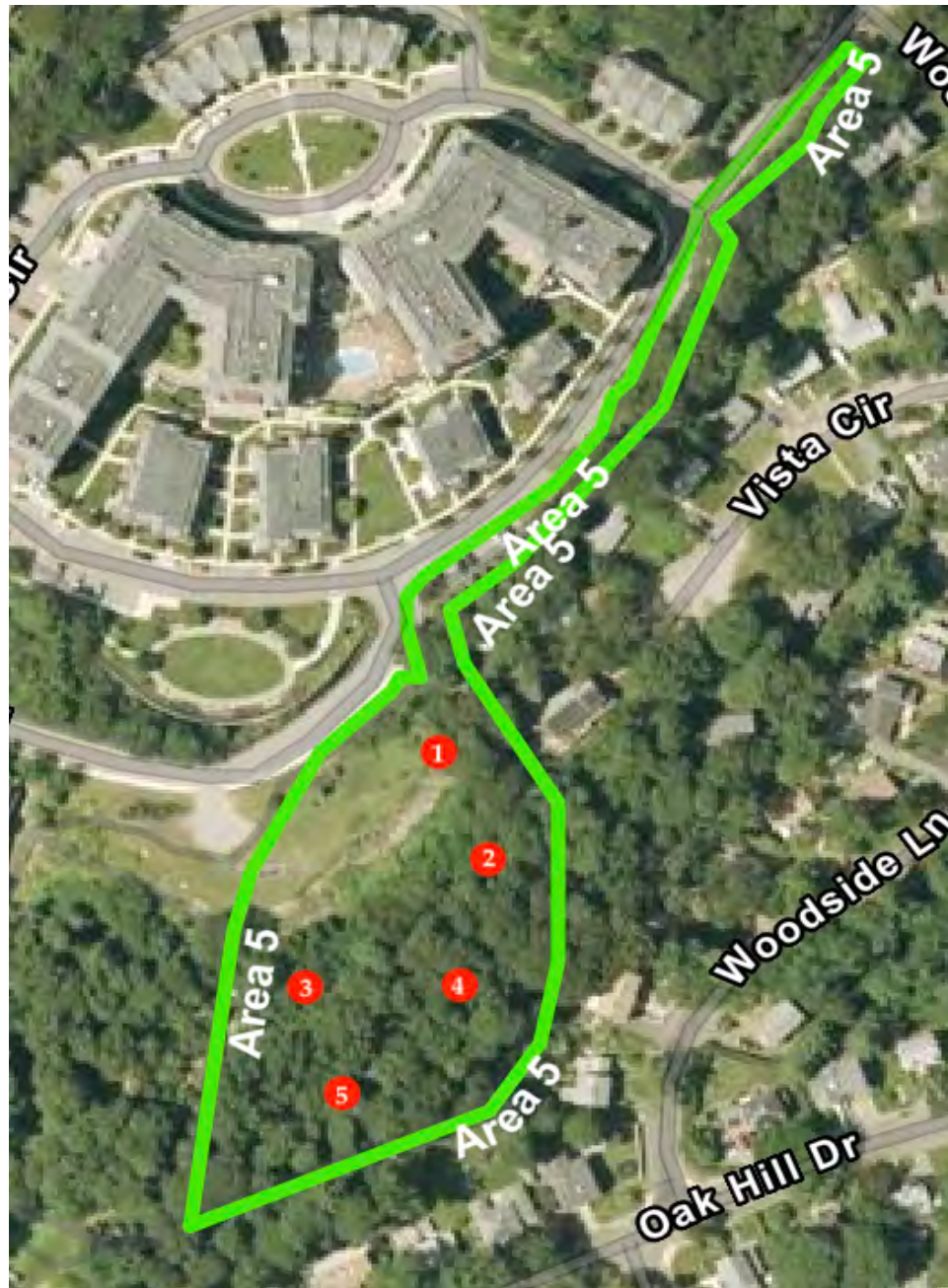
Area 3



Area 4



Area 5



Hydrology Study Specifications

A. Purpose

The hydrology study shall evaluate surface water and soil moisture conditions within the subject site in order to determine their influence on tree health, establishment, stability, and long-term viability. The study will identify drainage patterns, infiltration capacity, seasonal high-water levels, and watering adequacy, providing data to support arboricultural recommendations and management strategies.

B. Scope of Work

1. Site Characterization

- a. Map existing topography, slopes, and surface drainage features (using LiDAR, survey data, or site inspection).
- b. Delineate areas of surface water accumulation, runoff concentration, or erosion.
- c. Identify hydrologic modifications (impervious surfaces, grading, storm drains, watering systems).
- d. Note evidence of water stress in vegetation (drought stress, flooding, root rot, anaerobic soils).

2. Soil Moisture & Infiltration Testing

- a. Conduct infiltration tests at representative locations using the double-ring infiltrometer method (ASTM D3385).
- b. Record infiltration rate (in/hr) at 5-minute intervals until steady state is achieved.
- c. Collect volumetric soil moisture content at depths of 0–6 in, 6–12 in, and 12–24 in using a calibrated soil moisture probe or gravimetric sampling (ASTM D2216).
- d. Document depth to restrictive horizons, hardpans, or water tables (via auger borings).

3. Groundwater & Seasonal High-Water Table

- a. Determine seasonal high-water table using mottling indicators from soil cores (USDA-NRCS methods).
- b. Where available, review groundwater monitoring data, well logs, or local hydrologic datasets.
- c. If applicable, install piezometers or shallow monitoring wells to measure fluctuations over a minimum of 30 days.

4. Surface Water Dynamics

- a. Map catchment areas contributing flow to tree root zones.
- b. Evaluate stormwater inputs (roof drains, pavement runoff, sump discharges) for potential over-saturation or erosion impacts.
- c. Record presence of standing water >24 hrs after rain events.

5. Water Availability Assessment

- a. Assess watering coverage, frequency, and output (gallons/minute or inches/week).
- b. Compare irrigation delivery against tree water demand (based on canopy area or reference evapotranspiration data).

C. Sampling Density & Locations

1. Minimum of 1 infiltration/moisture test per 5,000 ft² or per distinct soil/hydrologic unit.
2. Minimum of 1 groundwater/piezometer reading per major landscape unit or per 2 acres.
3. Test locations selected to capture both “wet” and “dry” zones relative to observed vegetation performance.

D. Data Collection & Reporting Requirements

1. Field Records

- a. GPS coordinates of all test sites.
- b. Weather conditions for the preceding 7 days and on sampling date.
- c. Depths and duration of water retention observed.
- d. Field photos of sampling points and drainage features.

2. Laboratory / Analytical Methods

- a. Soil moisture gravimetric content: ASTM D2216.
- b. Infiltration: ASTM D3385 (Double-Ring Infiltrometer).
- c. Hydraulic conductivity (optional advanced test): ASTM D2434 (Constant Head).

4. Deliverables - Hydrology Study Report including:

- a. Site map with test locations, contours, drainage features, and trees of concern.
- b. Tabulated infiltration rates, moisture contents, groundwater depths.
- c. Seasonal water table and flooding risk assessment.
- d. Analysis of hydrology impacts on tree health, establishment, and root stability.
- e. Recommendations for mitigation (e.g., grading, sub-surface drainage, watering adjustments, tree species selection).
- f. All raw data sheets, lab results, and photographs as appendices.

E. Quality Assurance / Quality Control (QA/QC)

- 1. All measurements shall follow ASTM/USDA-NRCS recognized methods.
- 2. Instruments (infiltrometer, moisture probe) shall be calibrated within the last 12 months.
- 3. Chain-of-custody documentation required for any laboratory-analyzed soil moisture samples.

Wildlife Study Specifications

A. Introduction

1. Purpose of the study is to assess a baseline of biodiversity, monitoring impacts of urbanization, informing management plans.
2. Study objectives
 - a. Species inventory
 - b. Habitat evaluation
 - c. Human-wildlife interactions
 - d. Conservation recommendations

2. Methods

1. Survey Design
 - a. Study period (seasonal, year-round, or targeted).
 - b. Sampling strategy (transects, quadrats, point counts, camera traps).
 - c. Time of day/night considerations.
2. Target Groups
 - a. Birds (point counts, acoustic monitoring).
 - b. Mammals (camera traps, track surveys).
 - c. Insects & pollinators (sweep netting, pan traps).
 - d. Amphibians/reptiles (visual encounter, cover boards).
 - e. Plants (flora survey for habitat context).
3. Data Collection
 - a. Recording format (field sheets, mobile apps, GIS).
 - b. Environmental variables (canopy cover, temperature, soil moisture, disturbance levels).
 - c. Human interaction observations (feeding, trampling, pets, lighting).

3. Data Analysis

1. Species richness, abundance, and diversity indices.
2. Habitat quality assessments.
3. Presence of invasive or indicator species.
4. Comparison with regional or historic data.
5. Mapping sightings with GIS.

4. Results

1. Summary of species documented (by group).
2. Notable or sensitive species.
3. Habitat usage patterns.
4. Impacts of urban pressures.

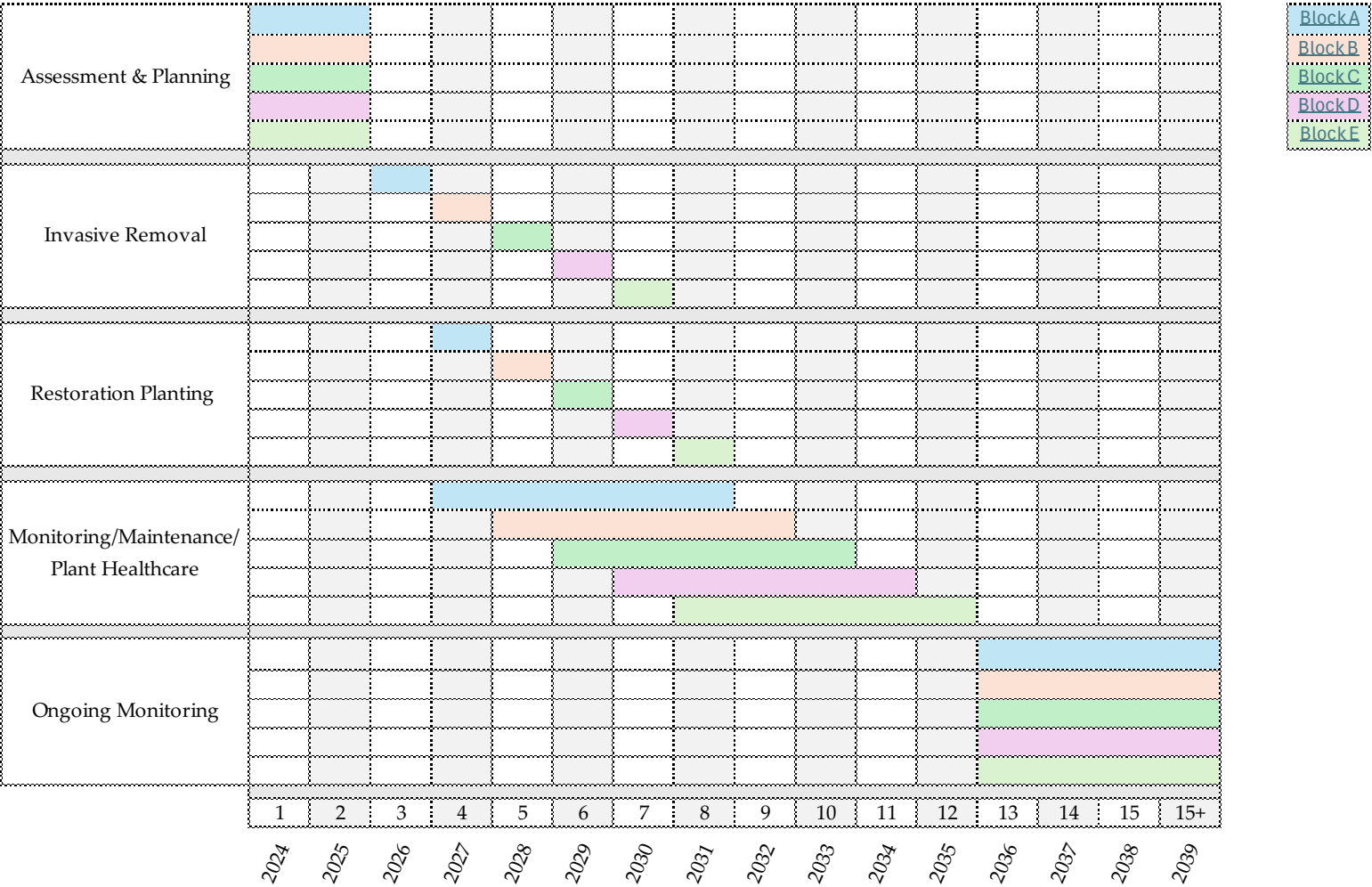
5. Discussion

1. Ecological significance of findings.
2. Connectivity to nearby green spaces.
3. Threats or limitations identified.
4. Limitations of the study (sampling bias, time constraints).

6. Recommendations

1. Management practices (e.g., planting native vegetation, invasive removal, creating habitat structures).
2. Wildlife-friendly infrastructure (corridors, pollinator gardens, bird-safe windows).
3. Monitoring plans (long-term citizen science involvement, repeat surveys).

Execution Time-Line



Arlington 360 Invasive Species Management and Restoration Plan

Summary

This 15+ year ecological restoration plan outlines the phased removal of invasive plant species and the re-establishment of native vegetation at the Arlington 360 site in Arlington, Massachusetts. The plan provides a structured approach to restoring ecological balance, improving biodiversity, stabilizing soils, and fostering sustainable community stewardship.

Through targeted removal and long-term management, the project aims to:

- Re-establish native plant communities that support local wildlife and pollinators.
- Enhance biodiversity by promoting a balanced and resilient ecosystem.
- Improve soil and water quality by restoring natural nutrient cycling and stabilizing soils.
- Reduce maintenance costs over time by transitioning from invasive dominated to self-sustaining native vegetation.
- Increase ecological connectivity between fragmented green spaces, improving habitat for urban and migratory species.
- Engage the community in stewardship and awareness of local natural resources.
- Introduce passive recreational space

Goals and Measurable Objectives

The primary goal of removing invasive species is to restore and protect the ecological integrity of the site by eliminating or reducing non-native, aggressive plants that displace native vegetation, alter habitat structure, and degrade soil and hydrological functions.

A. Invasive Vegetation Control Goals

1. Reduce total targeted invasive plant cover by at least 80% within the first 7 years of implementation (Years 3-7)
 - a. Each Area will be broken into 5 zones
 - b. One Zone from each Area will collectively be considered a Block for restoration.
This approach will not overly impact large areas of the site and will also allow for success assessment to determine if variations to the plan should be made.
 - c. Each Block will have staggered starts in one-year increments
 - d. The first Block will commence in 2026
2. Achieve and maintain $\geq 70\%$ native vegetative cover across restoration zones by Year 8.
 - a. Each Block will be planted in the year following invasive removal
 - i. This will allow to gauge success
 - ii. Will also allow for herbicides, if used, to not be a factor in planting
3. Establish a minimum of 20 native species representing all vegetation strata (groundcover, shrub, canopy) by Year 8.
The following plant lists are recommended species. Final plant selection will depend on analysis of soil study, nursery availability, and success rates. Planting selection may be adjusted based on performance.

a. Canopy Trees

<i>Acer rubrum</i>	<i>Cercis canadensis</i>
<i>Acer saccharum</i>	<i>Liriodendron tulipifera</i>
<i>Quercus alba</i>	<i>Pinus strobus</i>
<i>Quercus rubra</i>	<i>Juniperus virginiana</i>
<i>Quercus coccinea</i>	<i>Chamaecyparis thyoides</i>
<i>Nyssa sylvatica</i>	<i>Sassafras albidum</i>
<i>Carya ovata</i>	<i>Tilia americana</i>
<i>Cornus florida</i>	

b. Shrubs

<i>Aronia arbutifolia</i>	<i>Prunus maritima</i>
<i>Vaccinium corymbosum</i>	<i>Sambucus canadensis</i>
<i>Ilex verticillata</i>	<i>Viburnum dentatum</i>
<i>Ilex glabra</i>	<i>Aronia melanocarpa</i>
<i>Lindera benzoin</i>	<i>Kalmia latifolia</i>

c. Ground Cover

<i>Arctostaphylos uvaursi</i>	<i>Carex pensylvanica</i>
<i>Mitchella repens</i>	<i>Phlox divaricata</i>
<i>Gaultheria procumbens</i>	<i>Fragaria virginiana</i>
<i>Gaultheria hispidula</i>	<i>Aquilegia canadensis</i>

4. Maintain <10% invasive regrowth in treated areas during long-term monitoring (Years 9–15+).

B. Habitat Quality

1. Increase pollinator species richness (bees, butterflies) by at least 25% compared to baseline surveys by Year 10.
2. Document return or increase of indicator wildlife species (e.g., native songbirds, amphibians) within 10 years.
3. Attempt to establish functional habitat connectivity between target restoration areas and adjacent green spaces by Year 15.

C. Soil and Hydrological Health

1. Improve soil organic matter content by 20% (relative to baseline, based on soil study results) within 8 years through native vegetation establishment and organic matter retention.
2. Achieve stable soil cover (>80% vegetative or mulch cover) of each Block, within 2 years of the commencement of restoration of said Block, to minimize erosion and nutrient loss.
3. Restore natural drainage and infiltration patterns by removing invasive root mats and improving soil permeability, based on results of soil and hydrology tests, within 8 years.

D. Long-Term Sustainability

1. Implement an annual adaptive management cycle based on monitoring data to refine treatment and planting strategies.
2. Establish a community stewardship program with at least 30 volunteer participants annually by Year 10 to support ongoing maintenance.
3. Develop and maintain a permanent monitoring protocol for vegetation and wildlife, with annual reporting to

E. Implementation Plan

1. Assessment & Planning (Years 1–2)
Conduct baseline surveys, mapping, and prioritization of invasive populations. Develop restoration zones, finalize logistics, and pilot small-scale control measures.
2. Initial Control & Restoration (Years 3–7)
Aggressively suppress invasive populations using mechanical, targeted chemical, and biological methods. Begin early native re-establishment and soil stabilization efforts.
3. Broad-Scale Re-Vegetation (Years 4–8)
Expand native planting, diversify vegetation structure, and enhance habitat quality. Continue suppression of
4. Adaptive Management & Maintenance (Years 9–12)
Transition to long-term stewardship. Maintain low invasive cover, monitor ecosystem health, and implement adaptive strategies based on data trends.

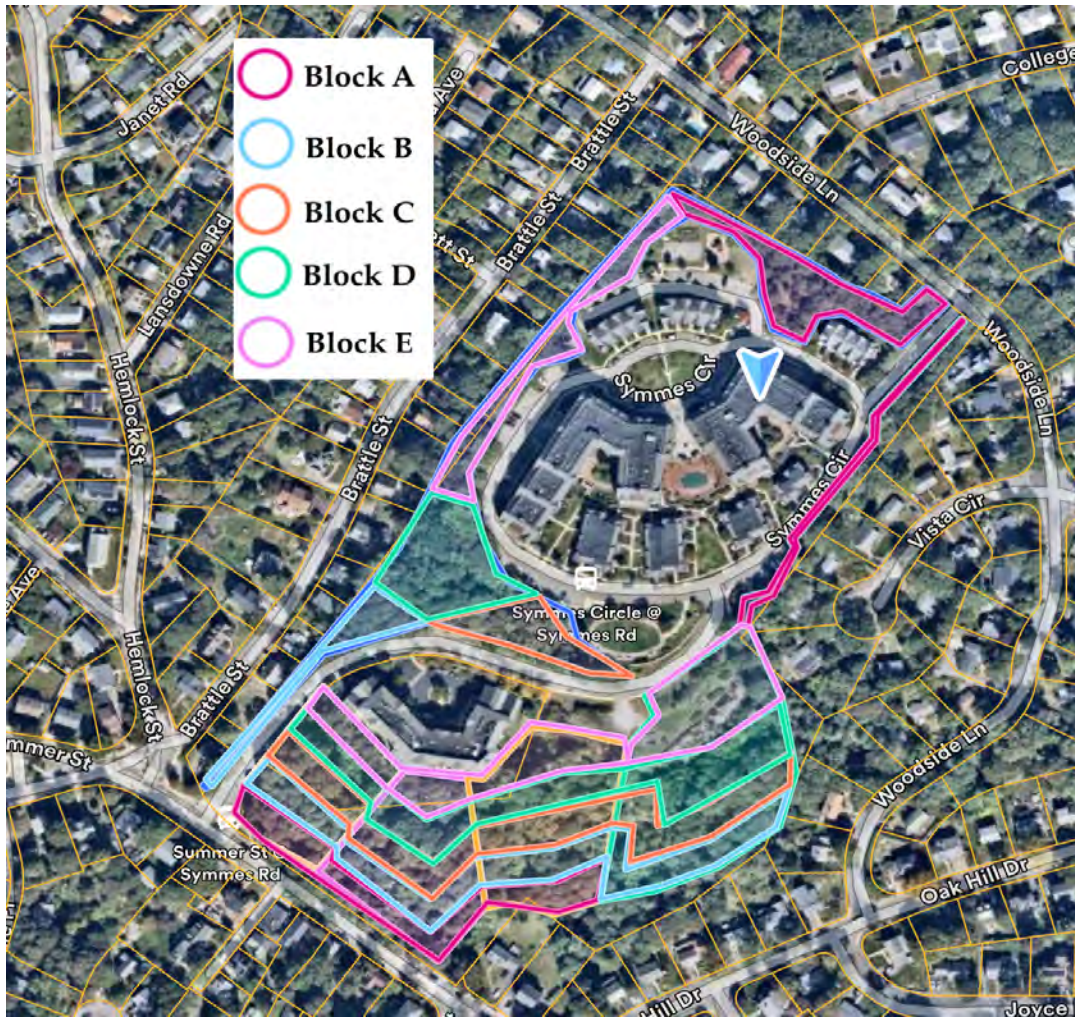
F. Ecological Monitoring and Adaptive Management

Monitoring will be conducted quarterly by a consulting arborist. Field reports distributed to stakeholders. An annually summary report will also be compiled and distributed. Data will track changes in species composition, invasive cover, native regeneration, habitat quality, and success rates. Findings will guide adaptive management decisions to refine methods and sustain ecological gains.

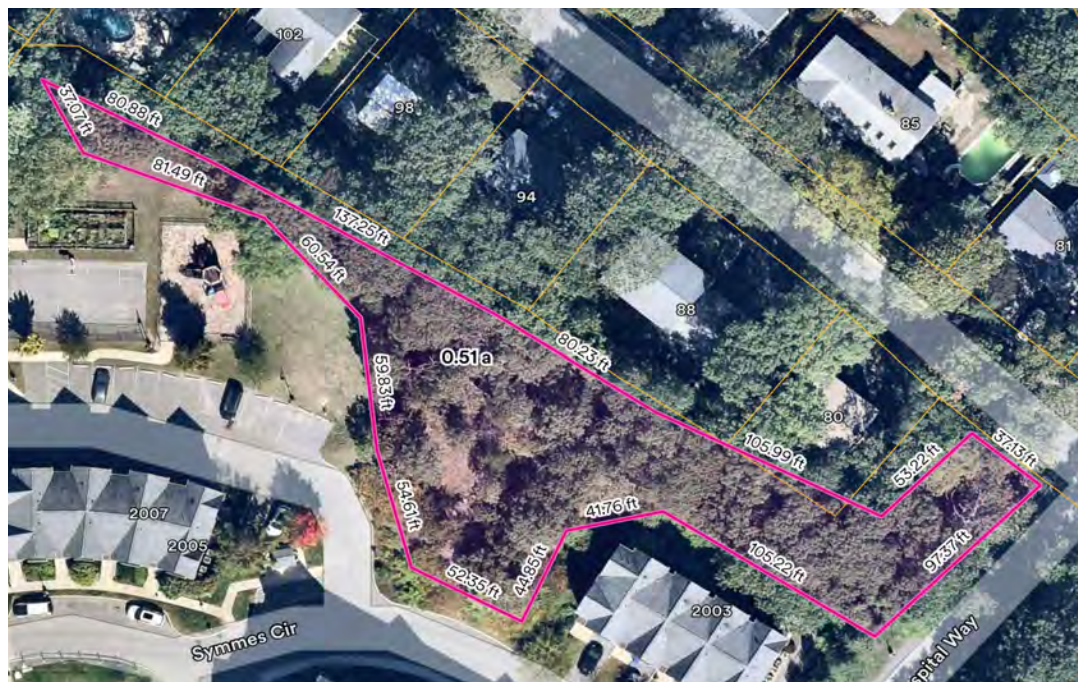
G. Physical Site Monitoring

1. Will be conducted by an agent of the owner to ensure site integrity to ensure:
 - a. Abutters compliance, i.e. any encroachments
 - b. Bi-Annual Clean Ups organized by the owner's agent to maintain a clean and debris-free site.
 - c. Suggested frequency of the monitoring visits are early spring and late fall.

Master Block Divisions



Block A



Block B



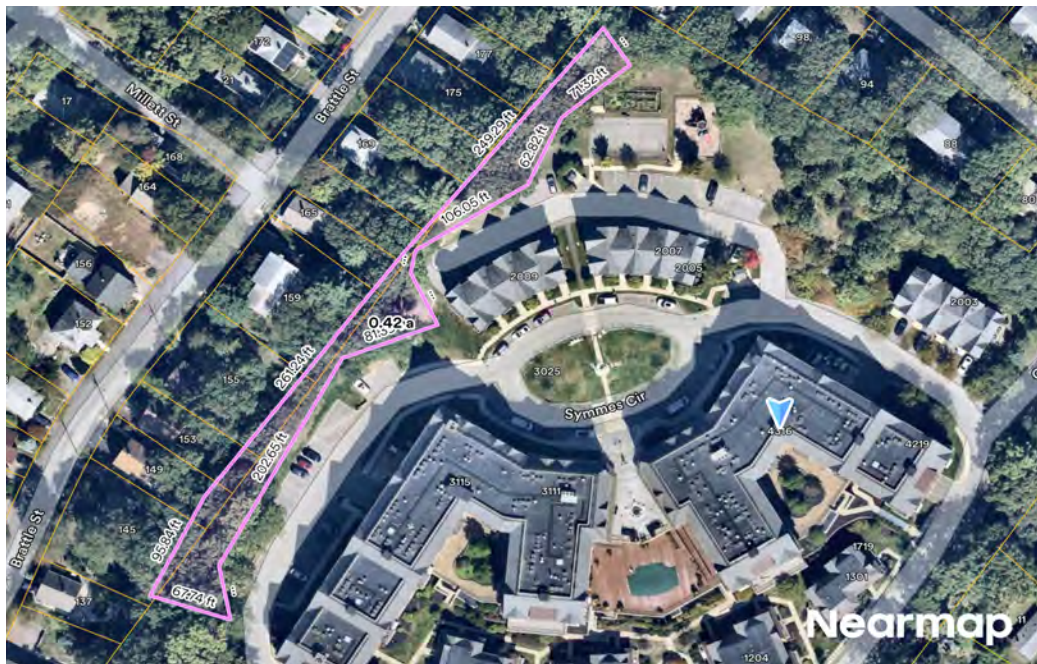
Block C



Block D



Block E



Invasive Species Control Practices

The objective of this plan is to systematically reduce invasive plant populations and re-establish native vegetation communities in order to restore ecological balance, enhance biodiversity, and promote the long-term resilience of the site's natural ecosystem.

Removal and Suppression Procedures

The Removal and Suppression phase involves a structured sequence of operations designed to effectively eliminate invasive plant species while protecting soil integrity and preserving existing native vegetation. The following steps define the process:

Step 1 – Pre-Removal Assessment

- Map and flag all invasive populations by species and density class (e.g., light, moderate, heavy infestation).
- Identify adjacent native species and sensitive areas to avoid disturbance.
- Determine appropriate removal methods for each target species (manual, mechanical, biological or chemical) based on growth form, root structure, and proximity to desirable vegetation.
- Establish access routes and staging areas to minimize soil compaction and damage to native plant communities.

Step 2 – Site Preparation

- Schedule removal during periods of low soil moisture to minimize rutting and compaction.
- Install erosion and sediment controls (e.g., silt fence, wattles, or coir logs) before mechanical activity begins.
- Clearly delineate treatment zones with flagging or temporary fencing.
- Notify all personnel of sensitive areas and non-target species to be preserved.

Step 3 – Manual Removal

- Hand-pull or dig smaller invasive plants (seedlings, herbaceous species, and small shrubs) ensuring complete removal of root systems.
- Use hand tools such as weed wrenches, shovels, or mattocks for woody stems up to 2 inches in diameter.
- Minimize soil disturbance; backfill and tamp disturbed soil immediately after extraction.
- Conduct removals before seed set to prevent dispersal.

Step 4 – Mechanical Removal

- For large infestations or mature woody invasives, use brush cutters, forestry mowers, or excavators equipped with hydraulic thumbs or mulching heads.
- Cut all stems at or near ground level and remove root crowns where feasible.
- Avoid excessive grading or scraping of the topsoil to preserve the native seed bank.
- Chip, solarize, or remove all biomass from the site to prevent vegetative regeneration.

Step 5 – Targeted Chemical Control

- Apply selective herbicide treatments only under supervision of a licensed applicator and in compliance with Massachusetts Pesticide Regulations.
- Use cut-stump or basal bark applications for woody species, spot foliar treatment for herbaceous perennials.
- Choose herbicides labeled for natural area use (e.g., glyphosate or triclopyr formulations).
- No broadcast spraying is permitted. Maintain buffer distances of ≥ 25 ft from wetlands or surface waters unless otherwise approved.
- Mark treated areas and maintain post-treatment signage until safe re-entry period expires.

Step 6 – Biomass Handling and Disposal

- Collect and remove all invasive plant material promptly after cutting or uprooting.
- Do not compost or chip untreated material on site unless solarized under black plastic for at least 4 weeks.
- Transport all debris in sealed loads to an approved disposal or composting facility.
- For root or seed-bearing material, disposal must comply with MassDEP and local conservation commission guidelines.

Step 7 – Site Stabilization

- Immediately after removal, install biodegradable erosion control blankets or seed disturbed areas with a native nurse crop (e.g., annual ryegrass, Virginia wildrye).
- Apply 2–3 inches of clean wood mulch or leaf litter to suppress weed regrowth and protect

Step 8 – Follow-Up Treatments

- Inspect treated areas twice during each growing season for resprouts or secondary invasions.
- Spot-treat regrowth promptly using manual or targeted herbicide methods.
- Continue follow-up for a minimum of five consecutive growing seasons or until the invasive cover remains below 5%.

Invasive Species Suppression Execution Plan

Overview

The overarching goal of this plan is to reduce invasive species dominance and promote the recovery of native vegetation, thereby restoring the ecological integrity and natural balance of the landscape.

The fundamental goal is to define target areas, suppress invasive species, and preserve and bolster native species.

Target Areas

Phased Implementation Approach

The Arlington 360 site has been previously delineated into five primary Management Areas (1-5) to facilitate the study and mapping of invasive species density. For implementation purposes, each Management Area has now been further subdivided into five Sub-Areas, or Blocks (A–E).

This phased approach minimizes site disturbance by focusing work within smaller, manageable sections. It also provides controlled access to interior regions by establishing sequential ingress and egress routes, enabling efficient logistics and reducing soil compaction. Moreover, dividing the site into Blocks allows for measurable evaluation of treatment effectiveness and adaptive adjustments based on monitoring outcomes.

Each year, one Block within every Management Area will be the focus of invasive species suppression efforts — Block A in 2026, Block B in 2027, and so on — resulting in a complete treatment cycle every five years. This rotation supports consistent progress while maintaining ecological stability across the broader site.

Suppression of Invasive Species

The objective of this program is to integrate Containment, Suppression, and Eradication strategies based on the specific invasive species present, their density, maturity, and spatial distribution.

The ultimate goal is the eradication of the majority of invasive species identified on site, thereby restoring ecological integrity and promoting the recovery of native plant communities. A combination of manual, mechanical, chemical, and biological control methods will be applied as appropriate to each species and site condition.

Effective control will require multiple consecutive years of monitoring and follow-up treatment to limit regrowth and prevent re-establishment of invasive populations. Long-term success will depend on consistent observation, adaptive management, and timely intervention.

*Exception: Norway Maple (*Acer platanoides*)

An exception to the general invasive species control approach will be applied to Norway maple (*Acer platanoides*). The site previously functioned as a nursery for this species before it was classified as invasive, resulting in an unusually high population density. Accordingly, this species will be managed under a specialized treatment protocol.

As a baseline criterion, smaller specimens (<12 inches DBH) will generally be targeted for removal. Larger trees (≥12 inches DBH) will be individually assessed in the field and selectively removed based on site conditions and the recommendations of the consulting arborist. In certain cases, smaller trees may also be retained when their preservation supports overall canopy structure or habitat value.

Prior to invasive control activities in each Block, the consulting arborist will conduct a pre-treatment site walk and tag individual Norway maples designated for preservation.

Native Species Populations

With the goal of increasing native species populations, care will be taken to identify and protect existing native vegetation within each Block during invasive species management activities. Individual plants or areas of high native plant density will be located, documented, and delineated by the consulting arborist to ensure their preservation throughout all phases of operations.

Native Species Restoration Planting Procedures

The restoration planting phase focuses on re-establishing a diverse and resilient native plant community following the removal of invasive vegetation. All work shall be conducted under the supervision of a certified arborist, restoration ecologist, or qualified landscape contractor experienced in native ecosystem restoration.

Step 1. Pre-Planting Preparation

- **Site Assessment:** Confirm that invasive removal and soil stabilization are complete before planting.
- **Soil Evaluation:** Collect soil samples to determine pH, organic matter content, and nutrient availability; amend soils only as recommended.
- **Weed Suppression:** Conduct a final inspection for invasive regrowth and remove any residual invasive material by hand.
- **Layout and Staging:** Mark planting zones and access routes to minimize disturbance. Organize plant material by species and size class prior to installation.

Step 2. Plant Selection and Procurement

- **Species Composition:** Select species native to eastern Massachusetts that are appropriate to site hydrology, light levels, and soil conditions.
- **Genetic Source:** Use locally adapted genotypes from New England nurseries; no wild-collected material permitted.
- **Plant Quality:** Stock must be healthy, free from disease, girdling roots, and invasive hitchhikers.

Type	Container/Bare Root Size	Height/Caliper
Trees	5–15 gal container or 1.5–2" cal. B&B	6–10 ft
Shrubs	2–5 gal container	18–36 in
Herbaceous plugs	50-cell flats	4–6 in tall
Groundcovers	32–50-cell plugs	Established root mass

Step 3. Planting Procedures

- **Timing:** Conduct planting in spring or early fall during moderate soil moisture and temperature conditions.
- **Planting Holes:** Excavate holes twice the width of the root ball and equal in depth to the root system.

- Installation: Place plant with root flare at grade, remove containers or burlap, backfill with native soil, and apply mulch.
- Watering: Water thoroughly after installation (minimum 5 gallons per tree, 2 gallons per shrub).

Step 4. Layout and Density

- Tree Density: 200–250 trees per acre, varied by microhabitat.
- Shrub Density: 400–600 shrubs per acre, planted in clusters to mimic natural regeneration.
- Herbaceous Layer: 3 plugs per square foot, arranged irregularly to replicate native groundcover patterns.
- Spacing: Avoid uniform rows; maintain naturalistic distribution with open spaces for succession.

Step 5. Soil Stabilization and Protection

- Apply erosion control blankets or coir mats on disturbed slopes (>3:1).
- Install temporary fencing or signage around sensitive plantings to prevent trampling.
- Maintain tree guards or shelters on young trees to prevent herbivory and mechanical damage.

Step 6. Watering and Maintenance

- Maintain soil moisture through the first two growing seasons via manual watering as prescribed.
- Replace mulch as needed to maintain coverage.
- Remove competing vegetation manually or by mowing to maintain clear zones around new plantings.

Step 7. Monitoring and Replacement

- Monitoring: Inspect plantings twice per growing season for survival, vigor, and invasive regrowth.
- Performance Criteria: $\geq 75\%$ survival rate after Year 1; $\geq 65\%$ survival rate after Year 3; $< 5\%$ invasive cover.
- Replacement: Replace all dead or unhealthy plants with the same species and size during the next planting season.

Step 8. Adaptive Management – Follow Up Maintenance

- Adjust species composition or density based on observed survival rates and ecological performance.
- Supplement with additional native seeding or underplanting as canopy conditions evolve.
- Continue monitoring for at least five years post-installation, transitioning to a maintenance-only regime once the site exhibits a stable native community.

Native Planting Execution Plan

The overarching goal of this plan is to restore the ecological integrity and resilience of the Arlington 360 landscape through the re-establishment of native plant communities. This involves reducing invasive species dominance, stabilizing soils, and creating conditions favorable to the long-term recovery and persistence of diverse native vegetation.

The primary objectives are to define restoration target areas, reintroduce appropriate native species, and promote the development of balanced plant communities that support wildlife, improve soil health, and enhance ecological function.

Target Areas

The Arlington 360 property has been organized into five primary Management Areas (1–5) for vegetation restoration planning. Each Management Area has been subdivided into five Sub-Areas, or Blocks (A–E) to facilitate phased restoration, planting, and monitoring activities.

Phased Implementation Approach

A phased implementation strategy will be used to coordinate native restoration plantings and manage site logistics efficiently. Work will proceed by Block, with one Block per Management Area addressed each year — Block A in 2026, Block B in 2027, and so on — completing a full restoration cycle every five years.

This systematic rotation minimizes disturbance, provides continuous habitat availability, and allows adaptive refinement of planting methods based on annual monitoring data. Sequential ingress and egress routes will be established to prevent soil compaction and protect sensitive areas.

Each phase will include:

- Site Preparation – Confirming invasive species suppression, soil stabilization, and erosion control.
- Planting Implementation – Installing native trees, shrubs, and groundcovers using locally sourced material suited to site conditions.
- Monitoring and Maintenance – Tracking plant establishment, replacing failed plants, and suppressing invasive regrowth.

Native Species Establishment and Enhancement

The objective of this program is to increase native plant cover, diversity, and ecological functionality across all Management Areas. Restoration efforts will emphasize structural diversity — incorporating canopy, understory, and ground layers — and ecological compatibility with existing soil, hydrology, and light conditions.

Planting densities, compositions, and species selections will be based on reference ecosystem models and field conditions, prioritizing species native to eastern Massachusetts. The plant palette will include approximately 20 native tree species, 15 native shrubs, and 10 native groundcovers, representing a mix of early and late successional species.

Long-term success will require consistent monitoring, adaptive management, and targeted replanting over multiple years to achieve measurable increases in native species richness and cover.

Protection of Existing Native Vegetation

During all restoration activities, existing native species will be carefully identified, documented, and protected. Areas containing high native plant density or rare species occurrences will be flagged in the field by the consulting arborist or restoration ecologist.

Protective measures — such as fencing, signage, and limited-access zones — will be implemented to prevent disturbance during planting and maintenance operations. Native seed banks and naturally regenerating seedlings will be preserved and incorporated into the restoration framework wherever feasible.

Performance Metrics

- Success of the native restoration planting effort will be measured by the following criteria:
- $\geq 75\%$ native plant survival rate after Year 1.
- $\geq 65\%$ native plant survival rate after Year 3.
- Native species cover increased by $\geq 50\%$ within five years.
- Invasive species cover reduced to $\leq 5\%$.
- Evidence of natural recruitment (seedlings, sprouts) of native species by Year 5.

Quarterly Monitoring Plan – Invasive Species Control

1. Purpose

The purpose of quarterly monitoring is to track the progress, effectiveness, and ecological outcomes of invasive species control and native vegetation recovery efforts. Regular assessments allow for adaptive management, early detection of regrowth, and timely corrective actions to maintain control success and ensure restoration objectives are met.

2. Frequency and Schedule

Monitoring shall occur four times annually, typically aligned with the following seasonal windows to capture plant growth dynamics:

- Q1- Spring (April–June): Early-season emergence and first flush of invasive growth.
- Q2- Summer (July–September): Peak vegetation activity and competitive interactions.
- Q3- Fall (October–November): Late-season persistence and seed set assessment.
- Q4- Winter (January–March): Structural review of woody vegetation and erosion control status.

Each monitoring visit will be conducted within ± 2 weeks of the target month to maintain consistency in data collection timing.

3. Responsibilities

Monitoring will be conducted by a qualified restoration ecologist, consulting arborist, or environmental scientist familiar with invasive species management and native plant restoration.

The same personnel should be retained across monitoring periods to ensure data consistency and accurate interpretation of trends.

4. Monitoring Methods

4.1. Visual Survey and Mapping

- a. Conduct systematic walkthroughs of each Management Area and Block.
- b. Record species composition, percent cover, and spatial distribution of invasive plants.

- c. Update digital or GIS-based maps showing invasive population changes, native vegetation recovery, and control boundaries.

4.2. Permanent Photo Points

- a. Establish fixed photo-monitoring stations in representative locations.
- b. Capture repeat photographs each quarter to document vegetation trends, treatment effects, and ground cover conditions.

4.3. Quantitative Sampling (as needed)

- a. In designated plots, record percent cover of invasives vs. natives using 1yd² quadrats or transects.
- b. Measure survival rates and vigor of planted native species.

4.4. Soil and Hydrology Observation

- a. Assess soil stability, erosion, and compaction in treatment zones.
- b. Record any hydrological changes that could influence plant establishment.

5. Data Recording and Reporting

Each quarterly monitoring event will produce a Monitoring Summary Report including:

- a. Date and season of monitoring.
- b. Weather and site conditions.
- c. Summary of observed invasive species presence and density.
- d. Photographs from permanent photo points.
- e. Notes on native species establishment, survival, and competition.
- f. Identification of areas requiring retreatment, supplemental planting, or erosion repair.
- g. Recommendations for next-quarter actions.

Reports will be submitted to the project manager or property owner within 30 days of the monitoring visit.

6. Adaptive Management Triggers

If monitoring reveals any of the following, corrective measures will be implemented within the next work cycle:

- a. Invasive species regrowth exceeding 5% cover in treated areas.
- b. Native plant survival dropping below 70% in the first two years.
- c. Erosion or bare soil exposure exceeding 10% of surface area.
- d. Evidence of new invasive species introductions or spread.

Follow-up treatments will be documented and re-evaluated in the next monitoring round.

7. Performance Benchmarks

Success will be determined based on measurable ecological outcomes:

Year (after execution)	Target Invasive Cover	Target Native Cover	Notes
1	≤15%	≥50%	Initial suppression and early recovery
2	≤10%	≥60%	Stable native recruitment
3+	≤5%	≥75%	Mature, self-sustaining native community

8. Long-Term Objective

The monitoring program will continue quarterly through the first 7 years of the project, after which the frequency may be reduced to annual intervals once invasive populations remain stable at or below target thresholds and native vegetation demonstrates self-sustaining growth.

Quarterly Monitoring Field Form – Invasive Species Control

1. Site and General Information

Conduct monitoring four times annually:

Project Name: _____

Site / Block: _____

Date / Season (Q1–Q4): _____

Observers: _____

Weather / Conditions: _____

2. Visual Survey & Mapping

- ☐ Systematic walkthrough of treatment areas completed
- ☐ All mapped invasive species populations checked
- ☐ Boundaries of treated areas confirmed
- ☐ Areas of regrowth, new infestations, or missed plants noted

Notes:

3. Invasive Species Inventory and Regrowth Assessment

Monitoring Plot ID: _____

Species	Density Class (Low/Med/High)	% Cover	Treatment Status	Notes

4. Treatment Effectiveness

- ☐ Previous treatments appear effective ($\geq 90\%$ control)
- ☐ Spot regrowth detected
- ☐ Resprouting or seedling establishment noted
- ☐ Retreatments required (list locations)

Photo File IDs / Notes:

5. Native Vegetation Recovery

- ☐ Native vegetation re-establishing in treated areas
- ☐ Supplemental native planting recommended
- ☐ Competition from residual invasives observed
- ☐ Soil stabilization adequate / erosion controlled

Indicator	Observation	Notes
Native % Cover		
Dominant Native Species		
Erosion or Bare Soil		
Hydrologic Changes		

6. Photographic Documentation

- ☐ Photos captured from fixed photo points
- ☐ Geo-referenced and labeled by zone
- ☐ Before-and-after comparison available

Photo File IDs / Notes:

7. Photographic Documentation

- ☐ Retreatment required (herbicide/mechanical)
- ☐ Follow-up seeding or planting needed
- ☐ Adjust mowing or control schedule
- ☐ Introduce biological control (if permitted)
- ☐ Update GIS maps with new infestation data

Notes:

7. Summary and Recommendations

Overall Site Condition:

Recommended Control Actions:

Follow-up Date / Next Monitoring Window:

Annual Monitoring Plan – Invasive Species Control

1. Purpose

The purpose of the annual report is to compile and interpret data collected from quarterly monitoring events to evaluate the overall effectiveness, progress toward restoration goals, and long-term ecological trajectory of the project area. The report serves as a comprehensive record for regulatory compliance, project accountability, and adaptive management decision-making.

2. Frequency and Schedule

Frequency: Annually (once per calendar year).

Reporting Period: January 1 – December 31.

Submission Deadline: By February 15 of the following year.

Distribution: Copies of the Annual Report will be submitted to the project owner, managing agency, and relevant municipal or conservation authorities.

3. Report Components

3.1. Executive Summary

Provide a concise overview of key findings, management actions, and outcomes from the year. Include:

- a. Summary of invasive species trends (increase/decrease).
- b. Significant site events (e.g., storm impacts, drought, new infestations).
- c. Overall assessment of progress toward ecological restoration goals.

3.2. Monitoring Data Summary

Compile findings from all four quarterly monitoring events:

- a. Vegetation Cover: Mean percent cover of invasives vs. natives per monitoring area.
- b. Species Composition: List of dominant species (invasive and native) observed during each quarter.
- c. Treatment Effectiveness: Evaluation of manual, mechanical, and chemical control success rates.
- d. Photo Documentation: Side-by-side comparison of representative photo points across the year.
- e. Soil and Hydrology Observations: Any noted erosion, sedimentation, or hydrologic changes affecting vegetation establishment.

3.3. Data Analysis and Interpretation

Provide narrative and visual analysis (charts, graphs, or GIS figures) describing:

- a. Trends in invasive species reduction (year-over-year).
- b. Areas of success and areas requiring continued intervention.
- c. Correlation between environmental conditions and control outcomes.

3.4. Adaptive Management Recommendations

Based on data interpretation, outline management strategies for the coming year:

- a. Areas targeted for retreatment or follow-up invasive control.
- b. Adjustments to control methods or timing.
- c. Modifications to monitoring frequency or data collection protocols.

3.5. Compliance and Performance Evaluation

Compare annual results against the project's measurable objectives and performance standards:

- a. Invasive cover maintained below 5% in treated areas.
- b. Evidence of natural regeneration or recruitment of native species.
- c. Stable or improved soil and hydrological conditions.

4. Reporting Deliverables

Each Annual Report shall include:

- a. A written document (PDF and Word formats).
- b. GIS-based site maps showing management areas, treatment zones, and monitoring plots.
- c. Photo documentation appendix (labeled and dated).
- d. Summary tables and graphs of key quantitative data.

5. Long-Term Integration

Annual reports will form the foundation for multi-year trend analysis and the final 15-Year Restoration Evaluation Report, ensuring that cumulative project performance can be measured against long-term ecological recovery goals and adaptive management benchmarks.

Maintenance Plan to Ensure Establishment

Purpose

The purpose of this follow-up maintenance plan is to ensure the long-term success of the restoration planting by supporting plant establishment, suppressing invasive species, maintaining site accessibility, and documenting ecological progress. The plan defines the maintenance activities, frequency, and responsibilities required to achieve sustained native vegetation recovery and ecosystem stability.

1. Duration and Schedule

Follow-up maintenance will be conducted for a minimum of three to five years following initial installation, or until native vegetation demonstrates stable establishment and natural regeneration.

- a. Year 1–2: Intensive maintenance and monitoring (monthly to quarterly)
- b. Year 3–5: Reduced frequency (biannual or annual) as vegetation establishes
- c. Beyond Year 5: Adaptive management as needed based on site performance

2. Maintenance Activities

2.1. Invasive Species Control

- a. Inspect all restoration areas quarterly for invasive regrowth. Remove invasive plants by hand-pulling, selective cutting, or targeted herbicide application (as permitted).
- b. herbicide application (as permitted).
- c. Maintain at least 90% invasive-free cover within restoration zones.
- d. Record all treatments in the monitoring log.

2.2. Mulching and Soil Protection

- a. Reapply organic mulch annually around installed plants to suppress weeds, moderate soil temperature, and retain moisture. Maintain 2–3 inches of mulch depth, avoiding direct contact with plant stems.
- b. stems.

2.3. Watering and Irrigation

- a. Provide supplemental watering during the first two growing seasons or during drought periods to maintain soil moisture at field capacity.
- b. Gradually reduce frequency as plant roots establish.

2.4. Plant Replacement (Replanting)

- a. Assess plant survival rates during each monitoring period.
Replace dead or failing plants to maintain at least 85% survival of
- b. installed material after two growing seasons.
Replacement species must match original planting plan specifications or
- c. approved substitutes.

2.5. Structural Maintenance

- a. Repair or replace tree shelters, stakes, fencing, or erosion-control materials as needed to maintain function.
- b. Remove supports once plants are self-sustaining (typically after 2–3 years).

2.6. Erosion and Drainage Management

- a. Monitor for erosion, compaction, or pooling water.
- b. Repair or stabilize affected areas with native seed, coir logs, or other approved methods.

Quarterly Monitoring Plan for Native Restoration Planting

1. Purpose

The purpose of this monitoring plan is to evaluate the success of native restoration plantings, assess plant survival and growth, and ensure that the site progresses toward a resilient, self-sustaining native ecosystem. Regular monitoring provides the data necessary for adaptive management, helping to guide maintenance, replacement planting, and habitat enhancement over the 15-year restoration period.

2. Frequency and Schedule

Monitoring shall occur four times annually, typically aligned with the following seasonal windows to capture plant growth dynamics:

Q1 – Early Spring (April): Assess overwinter survival, soil stability, and early-season emergence of herbaceous species.

Q2 – Early Summer (June): Evaluate new growth, foliage condition, and signs of transplant stress or pest activity.

Q3 – Late Summer (August): Document overall vigor, canopy development, and native community establishment.

Q4 – Fall (October): Conduct a comprehensive end-of-season assessment and plan for replacement planting if needed.

Each monitoring visit will be conducted within ± 2 weeks of the target month to maintain consistency in data collection timing.

3. Responsibilities

Monitoring will be conducted by a qualified restoration ecologist, consulting arborist, or environmental scientist familiar with invasive species management and native plant restoration.

The same personnel should be retained across monitoring periods to ensure data consistency and accurate interpretation of trends.

4. Monitoring Methods

Each quarterly inspection will include the following components:

1. Visual Survey & Mapping

a. Systematically walk the entire restoration area.

Map all planting zones and record species performance using GPS-enabled

b. data collection tools (e.g., Collector, Survey123, or GIS).

c. Note areas of mortality, erosion, competition, or hydrologic stress.

2. Vegetation Sampling

Establish permanent monitoring plots or transects within each restoration

- a. zone.
- b. Within each plot, record:
 - Percent survival by species and planting type (trees, shrubs, groundcover).
 - Growth parameters (height, crown spread, basal caliper for trees).
 - Percent cover of native vegetation.
 - Presence of competing non-native species.

3. Photographic Documentation

Capture geo-referenced photographs from fixed photo points within each

- a. zone.
- b. Maintain consistent angles and distances to document seasonal and annual changes in plant growth and site conditions.

4. Soil and Site Conditions

Observe and record soil moisture, evidence of erosion, compaction, mulch

- a. depth, and organic matter accumulation.
- b. Note any hydrologic changes (e.g., pooling, drought stress, or sedimentation).

5. Reporting Requirements

Following each monitoring event, a Quarterly Monitoring Report shall be prepared within 30 days, including:

- a. Monitoring date(s), weather conditions, and field personnel.
- b. Species-specific survival data and growth observations.
- c. Updated maps and photographs.
- d. Discussion of plant performance relative to project goals.
- e. Recommended maintenance actions (watering, weeding, mulching, replacement planting).

Reports will be submitted to the project manager or property owner within 30 days of the monitoring visit.

6. Adaptive Management Triggers

Monitoring data will be used to guide adaptive management decisions to improve planting success. Potential corrective actions may include:

- a. Replacement of dead or failing plants.
- b. Supplemental planting to improve density or species diversity.

- c. Adjusting watering, mulching, or mowing schedules.
- d. Controlling competitive vegetation that limits native establishment.
- e. Amending soils or modifying site hydrology to improve growing conditions.

7. Performance Benchmarks

Success will be determined based on quantifiable ecological outcomes:

Year (after planting)	Target Native Survival	Target Native Cover	Structural Goal	Notes
1	≥85% survival	≥50% cover	Establishment	Early growth and stabilization
2	≥80% survival	≥65% cover	Expansion	Developing structure and function
3–5	≥75% survival	≥80% cover	Maturation	Dense, self-sustaining vegetation
6–15	Sustained native dominance	≥90% cover	Long-term resilience	Stable native ecosystem

8. Long-Term Objective

The monitoring program will continue quarterly through the first 8 years of the project, after which the frequency may be reduced to annual intervals once invasive populations remain stable at or below target thresholds and native vegetation demonstrates self-sustaining growth.

Quarterly Monitoring Field Form – Native Restoration Planting

1. Site and General Information

Conduct monitoring four times annually:

Project Name: _____

Site / Block: _____

Date / Season (Q1–Q4): _____

Observers: _____

Weather / Conditions: _____

2. Visual Survey & Mapping

- ☐ Systematic walkthrough of restoration area completed
- ☐ GPS mapping updated / boundaries verified
- ☐ Areas of mortality, erosion, or competition noted

Notes:

3. Vegetation Sampling

Monitoring Plot ID: _____

Species	Type (Tree/Shrub/Gr oundcover)	% Survival	Height / Caliper	% Native Cover	Notes

4. Photographic Documentation

- ☐ Photos captured from fixed photo points

- ☐ Geo-referenced and labeled by zone

Photo File IDs / Notes:

5. Soil and Site Conditions

- ☐ Soil moisture adequate
- ☐ Evidence of erosion / compaction
- ☐ Mulch depth and organic matter observed
- ☐ Hydrologic changes (pooling, drought stress, sedimentation)

Notes:

6. Adaptive Management Observations

- ☐ Replacement planting required
- ☐ Supplemental planting or density adjustment needed
- ☐ Adjust watering / mulching / mowing schedule
- ☐ Vegetation control required
- ☐ Soil or hydrology adjustments recommended

Notes:

7. Summary and Recommendations

Overall Site Condition:

Recommended Maintenance Actions:

Follow-up Date / Next Monitoring Window:

Annual Monitoring Plan – Restoration Planting

1. Purpose

The purpose of the annual report is to compile and interpret data collected from quarterly monitoring events to evaluate the overall effectiveness, progress toward restoration goals, and long-term ecological trajectory of the project area. The report serves as a comprehensive record for regulatory compliance, project accountability, and adaptive management decision-making.

2. Frequency and Schedule

Frequency: Annually (once per calendar year).

Reporting Period: January 1 – December 31.

Submission Deadline: By February 15 of the following year.

Distribution: Copies of the Annual Report will be submitted to the project owner, managing agency, and relevant municipal or conservation authorities.

3. Report Components

3.1. Executive Summary

Provide a concise overview of key findings, management actions, and outcomes from the year. Include:

- a. Status of native species establishment.
- b. Significant site events (e.g., storm impacts, drought, new infestations).
- c. Overall assessment of progress toward ecological restoration goals.

3.2. Monitoring Data Summary

Compile findings from all four quarterly monitoring events:

- a. Vegetation Cover: Mean percent cover of invasives vs. natives per monitoring area.
- b. Species Composition: List of dominant species (invasive and native) observed during each quarter.
- c. Native Plant Survival: Annual survival and vigor ratings of installed plantings.
- d. Photo Documentation: Side-by-side comparison of representative photo points across the year.
- e. Soil and Hydrology Observations: Any noted erosion, sedimentation, or hydrologic changes affecting vegetation establishment.

3.3. Data Analysis and Interpretation

Provide narrative and visual analysis (charts, graphs, or GIS figures) describing:

- a. Rate of native vegetation recovery.
- b. Areas of success and areas requiring continued intervention.
- c. Correlation between environmental conditions and control outcomes.

3.4. Adaptive Management Recommendations

Based on data interpretation, outline management strategies for the coming year:

- a. Zones identified for supplemental native planting.
- b. Modifications to monitoring frequency or data collection protocols.

3.5. Compliance and Performance Evaluation

Compare annual results against the project's measurable objectives and performance standards:

- a. Minimum 70% survival of native plantings after one year.
- b. Evidence of natural regeneration or recruitment of native species.
- c. Stable or improved soil and hydrological conditions.

4. Reporting Deliverables

Each Annual Report shall include:

- a. A written document (PDF and Word formats).
- b. GIS-based site maps showing management areas, treatment zones, and monitoring plots.
- c. Photo documentation appendix (labeled and dated).
- d. Summary tables and graphs of key quantitative data.

5. Long-Term Integration

Annual reports will form the foundation for multi-year trend analysis and the final 15-Year Restoration Evaluation Report, ensuring that cumulative project performance can be measured against long-term ecological recovery goals and adaptive management benchmarks.

Goals of the Adaptive Management Plan

The Adaptive Management Plan provides a structured framework for responding to observed outcomes in the restoration site. Its purpose is to ensure that the restoration goals—native species establishment, invasive species suppression, and ecological function recovery—are achieved efficiently and sustainably.

The primary goals are as follows:

1. Promote Long-Term Ecological Success

Ensure that native vegetation communities establish, persist, and develop toward a self-sustaining, functional ecosystem representative of the target reference condition.

2. Incorporate Monitoring Feedback into Decision-Making

Use data from periodic monitoring (e.g., vegetation cover, species diversity, survival rates, soil and hydrologic conditions) to inform and guide management actions.

Adjust maintenance practices based on measured outcomes rather than fixed schedules.

3. Identify and Correct Limiting Factors

Detect and address barriers to restoration success—such as invasive

4. Optimize Resource Allocation

Direct labor and funding toward the most effective practices by eliminating or modifying methods that do not produce measurable progress toward restoration targets.

5. Maintain Compliance with Performance Standards

Ensure that restoration performance criteria (e.g., native plant survival, canopy coverage, invasive-free thresholds) are met or exceeded through responsive and documented management adjustments.

6. Document and Communicate Progress

Provide a transparent record of management actions, monitoring data, and adaptive responses in annual reports to demonstrate accountability and inform future restoration planning.

Adaptive Management Process

Adaptive management is a cyclical, evidence-based process that uses monitoring results to refine management strategies over time. This approach recognizes that ecological restoration is dynamic and that site conditions, weather, and biological responses can vary unpredictably.

The process follows an iterative loop of planning, monitoring, evaluation, adjustment, and implementation, ensuring that management actions remain effective and responsive to real site conditions.

1. Plan

Establish clear restoration objectives, performance standards, and monitoring protocols prior to implementation.

- a. Define target native community structure and species composition.
- b. Identify potential constraints such as soil limitations, hydrologic alteration, or invasive pressure.
Set measurable performance criteria (e.g., % native cover, % survival).
- c.

2. Implement

Carry out restoration activities and initial maintenance per the approved plan, including:

- a. Site preparation and invasive species removal.
- b. Plant installation and initial watering.
- c. Mulching, erosion control, and protective measures.

Implementation records (dates, methods, weather, materials used) should be maintained for reference during evaluation.

3. Monitor

Conduct systematic monitoring at defined intervals (e.g., quarterly in Year 1–2; annually thereafter).

- a. Record vegetation composition, survival, growth rates, and invasive species presence.
- b. Document physical site conditions such as soil stability and hydrologic performance.
- c. Use standardized data forms and fixed photo-points for consistency.

4. Evaluate

Analyze monitoring data to assess progress toward performance targets.

- a. Compare observed results to baseline and target conditions.
- b. Identify trends, deficiencies, or unexpected outcomes.
- c. Determine whether restoration actions are achieving ecological objectives.

5. Adjust

Refine management practices in response to findings.

- a. Modify invasive species control methods if suppression is inadequate.
- b. Adjust planting density, species selection, or watering schedules to improve establishment.
- c. Address erosion, herbivory, or other stressors as identified.

All adaptive measures must be documented and justified within the monitoring record.

6. Implement Adjustments and Continue Cycle

Reapply the revised management actions and continue the monitoring cycle.

This feedback loop allows the restoration project to evolve toward greater stability and ecological function with each iteration.

Adaptive Management Execution Plan

Step 1 – Establish Baseline Conditions and Performance Targets

Step 2 – Implement Restoration and Initial Maintenance

Step 3 – Conduct Scheduled Monitoring

Objective: Track ecological response and detect emerging issues.

Actions:

1. Perform monitoring quarterly in Years 1–2 (after planting), then annually in Years 3–5+ (after planting).
2. Record:
 - a. Survival and vigor of planted species
 - b. Invasive species presence and percent cover
 - c. Soil moisture, erosion, and hydrologic conditions
3. Photograph fixed photo points during each visit.
4. Compare current data with previous monitoring rounds to detect

Deliverables: Quarterly Monitoring Logs; Photo Documentation; Vegetation Data Sheets

Step 4 – Evaluate Performance

Objective: Assess progress toward restoration targets and identify limitations.

Actions:

1. Review monitoring data against baseline and performance criteria.
2. Evaluate plant establishment, species composition, and site stability.
3. Identify deficiencies (e.g., low survival, high invasive cover, erosion).
4. Determine probable causes (competition, drought, herbivory, poor soil).
5. Prioritize corrective actions based on severity and ecological importance.

Deliverables: Monitoring Summary; Performance Evaluation Table

Step 5 – Develop Corrective Action Plan

Objective: Design adaptive responses to improve site outcomes.

Actions:

1. Propose targeted management interventions, such as:
 - a. Supplemental planting or reseedling
 - b. Alternative invasive control methods
 - c. Soil amendment or erosion repair
 - d. Adjustment of watering or protection measures
2. Assign responsibilities and schedule corrective actions.

3. Obtain approval from the project manager or regulatory agency if required.

Deliverables: Adaptive Action Plan; Updated Maintenance Schedule

Step 6 – Implement Adjustments

Objective: Apply adaptive measures on the ground.

Actions:

1. Execute corrective actions per the updated plan.
2. Record labor, materials, and timing for all adaptive measures.
3. Verify results within one month of action where possible.
4. Maintain documentation for inclusion in the next monitoring report.

Deliverables: Field Implementation Record; Photo Documentation

Step 7 – Review and Continue Adaptive Cycle

Objective: Use updated outcomes to refine future management.

Actions:

1. Evaluate effectiveness of the implemented adjustments.
2. Update performance criteria or methods if warranted by results.
3. Continue monitoring and refinement annually until targets are met.
4. Once stable conditions are achieved, transition the site to passive management or long-term stewardship.

Deliverables: Annual Adaptive Management Report; Recommendations for Ongoing Stewardship

Execution Summary Table

Phase	Timeline	Primary Actions	Deliverables
1. Baseline	Pre-installation	Assess site, set targets	Baseline Report
2. Implementation	Year 0	Install plants, document	Planting Log
3. Monitoring	Y1–Y5	Collect field data	Monitoring Logs
4. Evaluation	After each	Assess performance	Evaluation Summary
5. Correction	As needed	Plan adaptive measures	Action Plan
6. Adjustment	As needed	Execute changes	Field Record
7. Review	Annual	Report and refine	Annual Report

Phase II

Invasive Species Removal & Restoration Execution

2026 Invasive Species Control Execution Plan – Block A

Objective

To systematically remove or suppress invasive plant populations within Block A and prepare the site for successful native vegetation establishment through seasonally phased management actions.

Step 1 – Winter (January–March): Pre-Removal Assessment & Planning

Goals: Identify infestation extent, select control methods, and prepare logistics.

Actions:

- a. Conduct a site-wide mapping survey of all invasive species by density class (light, moderate, heavy).
- b. Flag infestation boundaries and identify adjacent native vegetation and sensitive habitats to avoid.
- c. Determine control methods per species (manual, mechanical, or targeted herbicide).
- d. Develop access and staging plans to minimize compaction.
- e. Prepare necessary permits and pesticide notifications (if applicable).

Deliverables:

- a. Invasive Mapping Plan (GIS or field map)
- b. Method Matrix by Species
- c. Approved Access & Erosion Control Plan

Step 2 – Early Spring (April–May): Site Preparation

Goals: Prepare the site for safe, controlled invasive removal.

Actions:

- a. Install erosion and sediment controls (silt fence, coir logs, wattles).
- b. Delineate treatment zones with flagging or temporary fencing.
- c. Hold a pre-work briefing with crew to review sensitive areas and native protection protocols.
- d. Schedule removals to coincide with low soil moisture and before invasive seed set.

Deliverables:

- a. Completed Site Preparation Checklist
- b. Photo Documentation of Control Installations

Step 3 – Late Spring to Early Summer (May–June): Manual Removal

Goals: Remove early-season herbaceous and seedling invasives.

Actions:

- a. Hand-pull or dig small herbaceous and woody seedlings (<2" diameter).
Use hand tools (weed wrench, shovel, mattock) to ensure full root
- b. removal.
- c. Backfill and tamp disturbed soil; minimize ground disturbance.
- d. Focus on isolated infestations and light-density zones.

Deliverables:

- a. Daily Field Logs of Removal Activities
- b. Photographic Record of Cleared Areas

Step 4 – Summer (Jun–Aug): Mechanical Removal & Targeted Treatment

Goals: Suppress large, mature infestations and prevent regrowth.

Actions:

- a. Mechanically cut or mow dense invasive stands (e.g., multiflora rose, buckthorn, knotweed).
- b. Remove or mulch biomass using forestry mower or excavator with mulching head.
- c. Apply cut-stump or basal bark herbicide treatments under supervision of a licensed applicator.
- d. Maintain ≥ 25 ft buffers from wetlands and sensitive zones.
Post-treatment signage maintained per label requirements.

Deliverables:

- a. Chemical Application Records (with license number and rates)
- b. Post-Treatment Map and Photos

Step 5 – Late Summer to Fall (Aug–Oct): Biomass Disposal and Site Stabilization

Goals: Prevent reinfestation and stabilize disturbed soils.

Actions:

- a. Collect, and transport invasive biomass to an approved facility.
- b. Seed disturbed soils with a native nurse crop (annual ryegrass or Virginia wildrye) where needed.
- c. Apply 2–3 inches of mulch or leaf litter to exposed areas.
- d. Install biodegradable erosion control mats where slope or runoff risk exists.

Deliverables:

- a. Disposal Receipts or Solarization Records
- b. Stabilization Map and Photo Documentation

Step 6 – Fall (October–November): Follow-Up Inspection and Spot Treatments

Goals: Evaluate treatment efficacy and address regrowth.

Actions:

- a. Conduct site inspection for regrowth or missed patches.
- b. Perform spot-treatments manually or with selective herbicide.
- c. Record species, percent cover, and location of any remaining invasives.

Deliverables:

- a. Year-End Monitoring Summary
- b. Recommendations for 2027 Control Actions

Step 7 – Winter (December): Reporting and Planning for Year 2

Goals: Review outcomes and refine next year's approach.

Actions:

- a. Compile 2026 Summary Report documenting control measures, acreage treated, and invasive reduction achieved.
- b. Assess performance against targets (<10% invasive cover by end of 2026).
- c. Adjust strategies for 2027 based on observed site response.

Deliverables:

- a. 2026 Invasive Species Control Summary
- b. Updated Adaptive Management Plan for Block B

Performance Target (End of 2026)

- a. $\geq 75\%$ reduction in invasive plant cover in Block A
- b. $\leq 10\%$ re-sprouting by end of growing season
- c. 100% of disturbed areas stabilized with mulch or native cover

First-Year Invasive Species Control – Block A

Inspector:

Field Operations Sheet

Date:

This table provides a step-by-step schedule of invasive species control activities for Block A during Year 2026. Use this as a field reference to track completion, document observations, and record deliverables.

Winter 2026 January - March	Pre-removal assessment: ☐ Map invasive populations ☐ Target and tag appropriate Norway maples ☐ Flag sensitive areas ☐ Select methods ☐ Plan access routes
Early Spring 2026 April - May	Site preparation: ☐ Install erosion controls ☐ Delineate treatment zones ☐ Pre-work briefing
Late Spring/Early Summer 2026 May - June	Action: ☐ Manual removal of seedlings and small invasives ☐ Backfill soil ☐ Prevent seed set
Summer 2026 June - August	Action: ☐ Mechanical removal of large infestations ☐ Targeted chemical treatments by licensed applicator
Late Summer/Fall 2026 August - October	Action: ☐ Biomass disposal ☐ Site stabilization with mulch ☐ Native nurse crop ☐ Erosion control
Fall 2026 October - November	Action: ☐ Follow-up inspections ☐ Spot-treat resprouts and remaining invasives
Winter 2026 December	Compile 2026 summary report; assess targets; plan 2027 adaptive management

2027 Native Restoration Planting Execution Plan – Block A

Objective

To restore native plant communities in Block A through sequential removal of invasive species, soil stabilization, and phased native planting. The goal is to establish a self-sustaining native vegetation cover that supports long-term ecosystem recovery and biodiversity.

Step 1 – Winter (January–March): Site Assessment & Restoration Planning

Goals:

Define restoration targets, finalize invasive control strategy, and prepare planting design and logistics.

Actions:

- a. Conduct site-wide vegetation assessment identifying residual invasive cover, soil condition, and native regeneration potential.
- b. Update GIS map showing treatment zones, native reference areas, and restoration planting polygons.
- c. Select native species mixes (trees, shrubs, herbaceous) suitable to soil, hydrology, and light regime.
- d. Coordinate invasive control approach (manual, mechanical, or herbicide) with planting sequence to prevent re-infestation.
- e. Develop soil protection, erosion control, and access plans.

Deliverables:

- a. Updated Site Assessment and Planting Plan (GIS or field map)
- b. Native Species Palette and Quantities List
- c. Approved Access, Erosion & Staging Plan

Step 2 – Early Spring (April–May): Site Preparation & Invasive Control

Goals:

Prepare the site for native planting through initial invasive control and stabilization measures.

Actions:

- a. Implement erosion and sediment controls (silt fence, coir logs, wattles).
- b. Conduct mechanical or manual invasive removals before seed set.
- c. Remove invasive root systems where feasible; treat cut stems selectively.
- d. Stabilize disturbed soils with temporary nurse crop (annual ryegrass or sterile oats).

- e. Maintain 25-ft no-disturb buffer around wetlands or intact native zones.

Deliverables:

- a. Site Preparation Checklist
- b. Photo Documentation of Treated Areas
- c. Temporary Stabilization Record

Step 3–Late Spring to Early Summer(May–June): Initial Native Plant Installation

Goals:

Establish foundational native vegetation to occupy cleared areas and suppress regrowth of invasives.

Actions:

- a. Install native trees, shrubs, plugs, and seed mixes per plan specifications.
Use locally sourced, ecotypic plant material; confirm species substitutions
- b. with project manager.
Apply 2–3 inches of shredded leaf mulch or composted bark around all
- c. plantings.
- d. Water thoroughly after planting and during dry periods (1"/week equivalent).
- e. Record planting density, species, and survivorship in field log.

Deliverables:

- a. Planting Completion Report with species list and quantities
- b. As-Built Planting Map
- c. Photo Documentation of Planting Zones

Step 4 – Summer (June–August): Maintenance and Weed Management

Goals:

Protect new plantings, suppress invasive regrowth, and maintain soil moisture.

Actions:

- a. Conduct monthly visual inspections for regrowth and stress symptoms.
- b. Remove invasive seedlings by hand or with spot treatments as needed.
- c. Repair erosion control devices and mulch displacement.
- d. Water new plantings as required by weather and species needs.
- e. Maintain detailed maintenance logs.

Deliverables:

- a. Monthly Maintenance Records
- b. Mid-Season Progress Photos

c. Weed Control Summary

Step 5 – Late Summer to Fall (August–October): Supplemental Planting & Site Stabilization

Goals:

Enhance native cover and ensure complete soil stabilization before dormancy.

Actions:

- a. Replant areas where mortality exceeds 15%.
- b. Overseed with late-season native grasses to increase ground cover.
- c. Apply final mulch and stabilize slopes with biodegradable mats as needed.
- d. Monitor soil moisture, weed competition; adjust maintenance accordingly.

Deliverables:

- a. Supplemental Planting Record
- b. Final Stabilization Map and Photos
- c. Updated Species Inventory

Step 6 – Fall (October–November): Monitoring and Adaptive Review

Goals:

Evaluate planting success, invasive control effectiveness, and ecosystem response.

Actions:

- a. Conduct monitoring of vegetation cover, survival rates, and invasive regrowth.
- b. Compare against baseline data and target performance benchmarks.
- c. Identify zones requiring retreatment or replanting.
- d. Document soil, hydrology, and vegetation interactions for adaptive management.

Deliverables:

- a. Year-End Monitoring Summary
- b. Recommendations for 2028 Maintenance and Planting Adjustments

Step 7 – Winter (December): Reporting and 2028 Planning

Goals:

Compile outcomes and prepare continuation strategy 2028.

Actions:

- a. Summarize 2027 restoration progress, including invasive reduction, native establishment, and soil stabilization metrics.

- b. Assess performance against targets ($\geq 60\%$ native cover and $\leq 10\%$ invasive regrowth).
- c. Update adaptive management plan to refine methods, schedule, and plant palette for Block B or subsequent phases.

Deliverables:

- a. 2027 Restoration Summary Report
- b. Updated Adaptive Management and Monitoring Plan for 2028

Performance Targets (End of 2027)

- a. $\geq 60\%$ native vegetative cover established across Block A
- b. $\leq 10\%$ invasive resprouting by end of growing season
- c. 100% disturbed areas stabilized with mulch or live native cover
- d. $\geq 80\%$ survival of installed native woody plants

First-Year Native Restoration Planting – Block A

Date:

Field Operations Sheet

This table provides a step-by-step schedule of restoration planting and establishment activities for Block A during Year 2028. Use this as a field reference to track completion, document observations, and record deliverables.

Winter 2027 January - March	Post-Removal Assessment and Planning: ☐ Confirm completion of invasive species removal/debris disposal ☐ Conduct soil testing (pH, texture, compaction, organic matter) ☐ Map planting zones and restoration sub-blocks ☐ Identify and flag sensitive or erosion-prone areas ☐ Finalize native species list and planting design ☐ Source native plant materials (nursery coordination/scheduling)
Early Spring 2027 April - May	Site preparation: ☐ Install erosion and sediment controls (silt fence, coir logs, wattles) ☐ Prepare soil (decompact, amend, contour to promote infiltration) ☐ Mark planting locations and access routes ☐ Conduct pre-planting briefing for crews ☐ Verify delivery and storage of nursery stock
Late Spring/Early Summer 2027 May - June	Plant Installation Phase: ☐ Plant trees, shrubs, and herbaceous according to planting plan ☐ Water in all new plantings after installation ☐ Apply mulch rings or weed mats as specified ☐ Install tree protection (stakes, cages, or shelters) ☐ Verify survival and planting density after installation ☐ Record GPS locations or photo points for future monitoring
Summer 2027 June - August	Early Establishment Maintenance: ☐ Conduct biweekly watering as needed (weather dependent) ☐ Spot control of invasive regrowth; manual or targeted methods ☐ Replace failed or stressed plantings (>10% mortality) ☐ Monitor soil moisture and mulch integrity ☐ Document growth and survival metrics
Late Summer/Fall 2027 August - October	Stabilization and Adaptive Care: ☐ Install native nurse crop or cover crop for soil stabilization ☐ Supplement with late-season native plugs or seed mix ☐ Maintain erosion controls and access paths ☐ Spot treat resprouts or residual invasives ☐ Capture fixed-point photographs of all sub-blocks

Fall 2027 October - November	Monitoring and Evaluation: ☐ Conduct formal survival count and vegetation assessment ☐ Document % cover of native species vs. invasive regrowth ☐ Assess erosion, soil health, and hydrology indicators ☐ Recommend replacements, seeding, or soil work for 2028
Winter 2027 December	Reporting and Adaptive Management Planning: ☐ Compile 2027 summary monitoring report ☐ Evaluate performance benchmarks (survival rate $\geq 85\%$) ☐ Update GIS and field maps with new planting and regrowth data ☐ Plan 2028 adaptive maintenance schedule

Soil Restoration Execution Plan

A. Soil Improvement Actions Based on analysis of the Soil Study

1. Amendment Application: Apply compost, biochar, or native leaf mulch where organic matter is <3%.
2. Decompaction: Utilize subsoiling or air-spade techniques near plantings to restore infiltration and root growth capacity.
3. Mulching: Maintain 2–3" of organic mulch around plant bases and restoration beds to retain moisture and suppress weeds.
4. Soil Microbial Inoculation: Introduce native mycorrhizal inoculants in planting areas to enhance soil biota and nutrient cycling.

B. Erosion & Sediment Control

1. Stabilize exposed soils using biodegradable mats, native cover crops, or coir logs on slopes >3:1.
2. Install level spreaders or vegetated swales to slow surface flow and promote infiltration.
3. Inspect erosion controls quarterly and after storm events; repair or replace as needed.

C. Soil Monitoring & Maintenance

1. Reassess soil parameters every two years.
2. Document changes in infiltration rate, organic matter, and vegetation response.
3. Adjust amendment and mulching regimes based on observed performance.

Water Restoration Execution Plan

A. Hydrologic Assessment

1. Map natural drainage patterns and identify areas of compaction or impeded flow.
2. Evaluate seasonal moisture availability in each block to guide species selection.

B. Water Management Actions

1. Rehydration Measures: Install shallow swales, microbasins, or infiltration trenches where hydrology has been altered by invasive
2. Stormwater Integration: Where applicable, link restoration zones with stormwater retention or bioswale systems.
3. Watering Support: Provide temporary watering for planted natives during the first three growing seasons or prolonged droughts.

C. Water Quality Protection

1. Prevent sediment or nutrient runoff into adjacent wetlands or waterways.
2. Maintain vegetated buffer strips along water bodies (minimum 25 ft width).
3. Avoid fertilizer use; rely on organic amendments to support soil biology.

D. Hydrologic Monitoring

1. Record seasonal moisture levels at fixed stations using soil moisture meters or visual indicators.
2. Document standing water duration and vegetation response.
3. Adjust restoration structures as needed to maintain natural hydrologic function.

Habitat Design & Implementation

A. Habitat Zoning

1. Identify and designate habitat zones within each restoration block (e.g., pollinator meadow, shrub thicket, riparian buffer).
2. Integrate vertical structure: canopy, understory, and groundcover layers for multi-species shelter and forage.

B. Habitat Features

1. Retain coarse woody debris and select standing snags for nesting and cover.
2. Install bird boxes, bat houses, and pollinator hotels where appropriate.
3. Use native fruit- and seed-bearing shrubs to provide seasonal food sources.

C. Pollinator Support

1. Establish mixed wildflower meadows with continuous bloom from April to October.
2. Maintain at least 60% native forb cover within pollinator zones.
3. Avoid pesticide use; employ manual or mechanical control for pest management.

D. Wildlife Corridor Enhancement

1. Connect restoration zones with existing natural habitats or adjacent conservation lands.
2. Preserve riparian and edge habitats as movement corridors for small mammals and amphibians.

E. Monitoring & Adaptive Management

1. Conduct annual surveys of target indicator species (birds, pollinators, amphibians).
2. Record habitat use and signs of reproduction (e.g., nests, burrows, egg masses).
3. Modify plantings and structural elements based on wildlife response data.

F. Long-Term Maintenance and Community Stewardship

1. Inspect habitat structures annually; repair or replace as needed.
2. Control invasive species that may recolonize habitat zones.
3. Conduct selective mowing of meadows only after seed set and pollinator activity declines (late fall).
4. Partner with local schools, conservation groups, and citizen scientists for ongoing wildlife monitoring.
5. Provide educational signage describing restoration benefits for wildlife and ecosystem health.



Town of Arlington, Massachusetts

DEP #091-0372: Notice of Intent: 40 Park Avenue (Continued from 10/23/25).

Summary:

DEP #091-0372: Notice of Intent: 40 Park Avenue (Continued from 10/23/25).

The Conservation Commission will hold a public hearing to consider a Notice of Intent to repair a loading dock at 40 Park Ave in Arlington. Areas proposed to be altered include the Riverfront Area and the Buffer Zone/Adjacent Upland Resource Area associated with Bank to Mill Brook.

ATTACHMENTS:

Type	File Name	Description
▢ Reference Material	40_Park_Ave_Site_Improvements_NOI_-_Response_to_Comments____Revised_Materials.pdf	40 Park Ave Site Improvements NOI - Response to Comments & Revised Materials.pdf



To: David Morgan
Town of Arlington
Conservation Commission

Date: October 29, 2025

Project #: 13346.07

Memorandum

From: Nicholas Skoly, VHB
Applicant Representative

Re: 40 Park Site Improvements NOI
Response to Comments

On behalf of 40 Park Avenue Associates, LLC, VHB is submitting the following memorandum in response to the comments received from members of the Arlington Conservation Commission during the October 23, 2025 Conservation Commission hearing. A Restoration Overlay plan and revised NOI plans are also included in this submission.

Response to Comments:

1. A question was raised regarding the classification of the Riverfront Area (RA) onsite as "degraded".

Response: Under the Wetlands Protection Act Regulations, redevelopment within a **degraded** or previously developed RA is defined at 310 CMR 10.58(5) as follows:

*"Redevelopment means replacement, rehabilitation or expansion of existing structures, improvement of existing roads, or reuse of degraded or previously developed areas. A previously developed riverfront area contains areas **degraded prior to August 7, 1996 by impervious surfaces from existing structures or pavement, absence of topsoil, junkyards, or abandoned dumping grounds.**"*

Under existing conditions on the project site, the RA exists almost entirely as degraded RA characterized either by existing pavement or a lack of topsoil, with the exception of the previously restored area within RA which was subject to an Enforcement Order by the Conservation Commission. As seen in the photographs below, RA within the limits of the project site is visibly degraded with little to no vegetation or topsoil currently present.

As shown in the aerial imagery below from March 1995, the site and surrounding areas were developed prior to August 7, 1996. Based on available imagery and site history, it can be inferred that the area has also been degraded since that time, meeting the definition of degraded RA included above.

From: VHB
Re: NOI Response to comments
October 29, 2025
Page 2



Memorandum



Looking northwest at the existing truck ramp on the project site. A lack of topsoil can be observed in the foreground of the photo.



Looking southwest at the existing building and adjacent pavement within the RA on the project site.

101 Walnut Street
Watertown, MA 02472-4026



Aerial imagery of the site from Google Earth, March 1995. The project site and surrounding development areas exist in the same conditions as today.

While the Project proposes 780 sf of permanent impact within this degraded RA, the Applicant is proposing to loam and seed the adjacent disturbed areas and improve stormwater management on the site which will help restore portions of the inner riparian zone. This work represents an improvement over existing conditions within degraded Riverfront Area on the site.

2. A question was raised regarding the applicability of restoration of degraded RA as mitigation.

Response: As stated in 310 CMR 10.58(5)(e): *"The area of proposed work shall not exceed the amount of degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the riverfront area, except in accordance with 310 CMR 10.58(5)(f) or (g)."*

Because the project does not propose impacts to any portion of the RA which is not already degraded (i.e. will not exceed the amount of currently degraded area), the 10% threshold is not applicable. The proposed plantings and stormwater improvements within the RA will provide an improvement over existing conditions, as required under 310 CMR 10.58(a).

3. The restoration area previously constructed to provide mitigation as required by the site's Enforcement Order was asked to be removed from the proposed stormwater improvements calculations to avoid "double counting" this improvement area.

Response: The existing restoration area square footage which overlapped (450 SF) has been deducted from the stormwater improvement calculations. Using the revised restoration area to be provided (1,660 SF), the project remains in compliance with the applicable stormwater regulations and requirements for the site. This update has also been provided to the Town of Arlington Department of Public Works Engineering Division for their use in reviewing the project and issuing a Stormwater Permit.



overlap area. has
been removed in
update calculations.





101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

Legend

Exist.	Prop.	
---	---	PROPERTY LINE
---	---	EASEMENT
---	---	FLOODPLAIN
---	---	100' BUFFER ZONE
---	---	50' BUFFER ZONE
---	---	25' NO DISTURB ZONE
---	---	200' RIVERFRONT AREA
---	---	EOP
---	---	EDGE OF PAVEMENT
---	---	BUILDING
---	---	EROSION CONTROL
---	---	MINOR CONTOUR
---	---	MAJOR CONTOUR
---	---	LOAM & SEED
---	---	TEST PIT LOCATION
---	---	DRAIN
---	---	SEWER
---	---	SEWER MANHOLE CONCENTRIC

Forms 11 and 12

Location Address or Lot No. 46 PARK AVE LEXINGTON, MA

On-site Review

Deep Hole Number TP1 Date 10/17/25 Time 2:30 PM Weather CLEAR

Location (Identify on site plan) AT BOTTOM STATION FROM 182.00

Land Use PARKING LOT Slope (%) 1-2.76 Surface Stones NONE

Vegetation SPARSE Landform STORM DRAINAGE

Position on landscape (sketch on the back)

Distances from:

Open Water Body	<u>47</u>	feet	Drainage way	<u>47</u>	feet
Possible Wet Area	<u>40</u>	feet	Property Line	<u>10</u>	feet
Drinking Water Well	<u>>250</u>	feet	Other		feet

DEEP OBSERVATION HOLE LOG*

Depth from Surface	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Moisture	Other (Structure, Stones, Boulders, Consistency, % gravel)
0-72"	FILL	SILT/CLAY			STONE & GRAVEL
72-90"	C1	SILT/CLAY			STONE & GRAVEL
90-120"	C2	SILT/CLAY	10YR 3/3		STONE & GRAVEL

* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) FLINT CLAY Depth to Bedrock N/A

Depth to Groundwater, Standing Water in the Hole: 108" Weeping from Pit Face: 108"

Estimated Seasonal High Ground Water: 108"

Percolation Test*

Date:	Time:
Observation Hole #	
Depth of Perc	
Start Pre-soak	
End Pre-soak	
Time at 12"	
Time at 9"	
Time at 6"	
Time (2'-6")	
Rate Min./Inch	

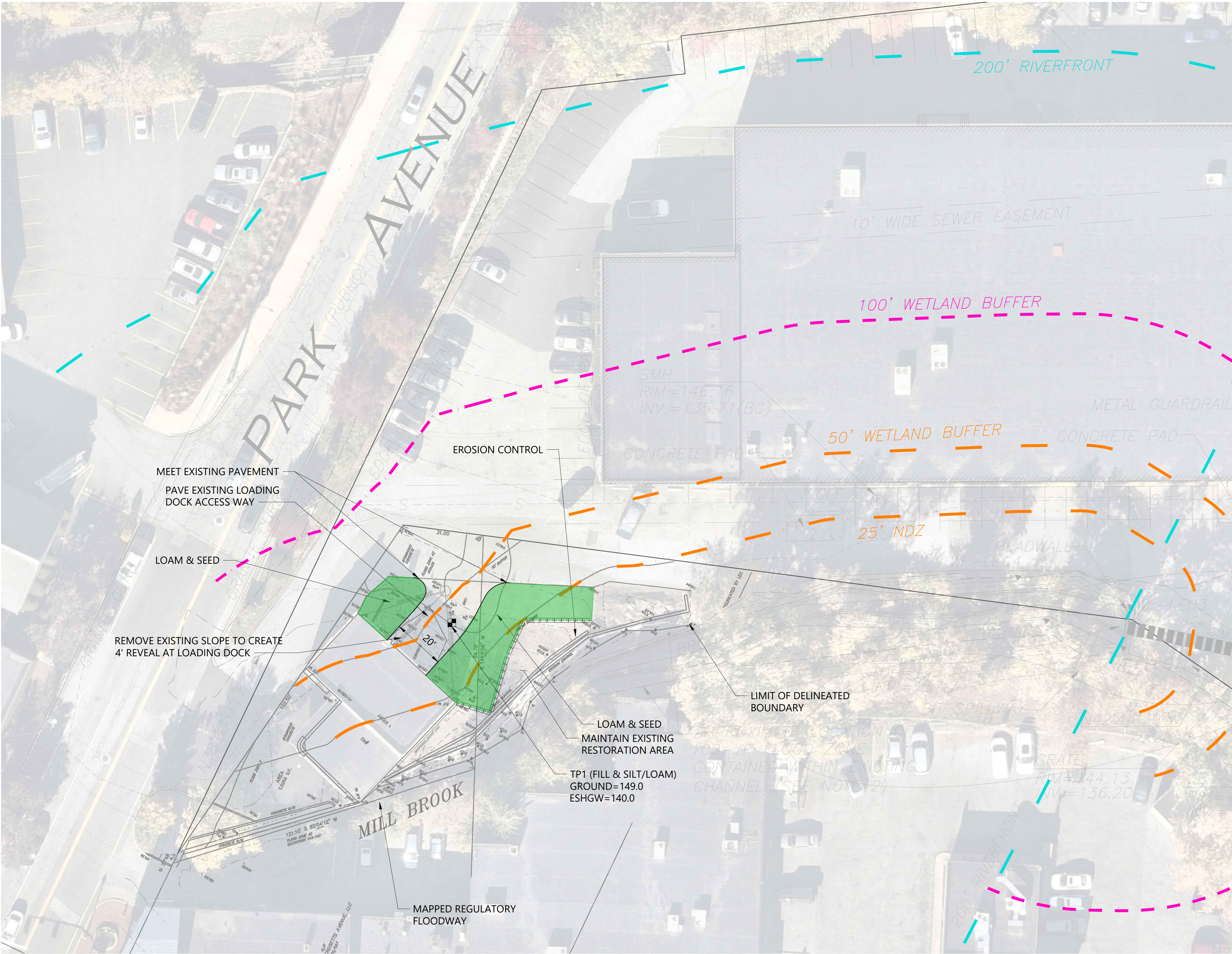
* Minimum of 1 percolation test must be performed in both the primary area AND reserve area.

Site Passed: ☐ Site Failed: ☒ NOT SUITABLE FOR INFILTRATION

Performed By: RICHARD P. MATTHEWS JR. PE (SE2831)

Witnessed By:

Vanasse Hangen Brustlin 101 Walnut Street Watertown, MA 02471 617-924-1770



Notes

- IN ACCORDANCE WITH STORMWATER MANAGEMENT PERMIT APPROVAL (UPON ISSUANCE), ARLINGTON ENGINEERING DIVISION AND DESIGN ENGINEER SHALL BE NOTIFIED TO PERFORM INSPECTIONS OF:
 - BOTTOM OF THE BASIN
 - THE SYSTEM AFTER INSTALLATION BUT BEFORE BACKFILL
- ADEQUATE MEASURES SHALL BE TAKEN AS NEEDED TO PREVENT RUNOFF SEDIMENT FROM THE SITE COLLECTING ON THE SIDEWALK, ROADWAY, OR ABUTTING PROPERTIES DURING CONSTRUCTION ACTIVITIES. SUCH MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO, ADDITIONAL SILT FENCING/HAYBALES AND SWEEPING. PLEASE INCLUDE A NOTE TO INDICATE THE REQUIREMENT TO REMOVE ALL SEDIMENT OR PRODUCTS OF EROSION FROM THE RIGHT OF WAY AND TO REQUIRE SWEEPING OF THE STREET WHEN NECESSARY.
- PROPOSED GRADING AND DOWNSPOUT OVERFLOWS SHALL NOT DIRECT RUNOFF TOWARDS ABUTTING PROPERTIES. RUNOFF SHOULD NOT BE DIRECTED ACROSS THE ADJACENT PROPERTY LINES.
- AS-BUILT PLAN/SKETCH OF ANY IMPERVIOUS AREAS ON SITE SHALL BE PROVIDED TO THE TOWN OF ARLINGTON ENGINEERING DIVISION FOLLOWING INSTALLATION. THIS PLAN SHALL INCLUDE SWING TIES, ELEVATIONS, AND OFFSETS.
- CONNECTION OF SUMP PUMP SYSTEMS TO ANY SUBSURFACE LEACHING SYSTEM ARE PROHIBITED
- IN ADDITION TO DIG-SAFE, THE CONTRACTOR SHALL ALSO CONTACT THE TOWN OF ARLINGTON WATER AND SEWER DIVISION AT 781-316-3310 TO REQUEST A MARKOUT OF TOWN UTILITIES.

Impervious Surface Summary

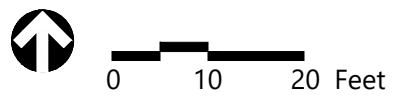
	Existing (SF)	Proposed (SF)	Alteration (SF)
Building Footprint	2210	2210	0
Bituminous Pavement	3,870	4,650	780

Peak Flow Summary (CFS)

Design Point	1	2-Year	10-Year	25-Year	100-Year
Existing	0.7	1.1	1.4	1.4	1.8
Proposed	0.7	1.1	1.4	1.4	1.8

Peak Volume Summary (CF)

Design Point	1	2-Year	10-Year	25-Year	100-Year
Existing	1,927	3,250	4,082	5,361	
Proposed	1,854	3,171	4,000	5,276	



40 Park Avenue

Arlington, MA

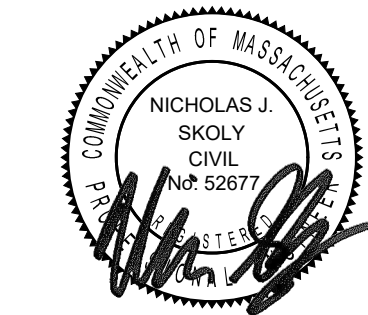
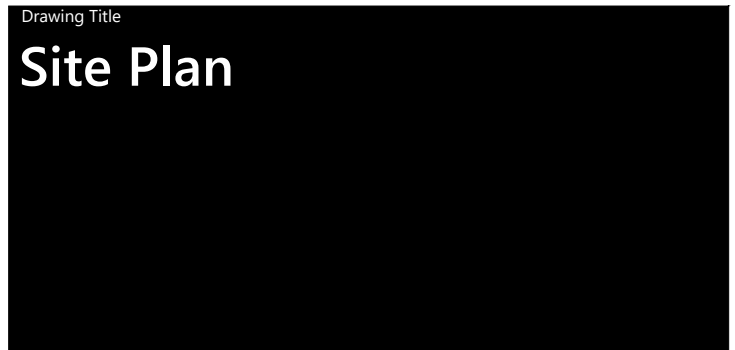
No.	Revision	Date	Appr'd.
1	Response to Engineering	10/22/2025	
1	Response to Conservation	10/28/2025	

Designed by: _____ Checked by: NJS

Issued for: _____ Date: _____

Notice of Intent

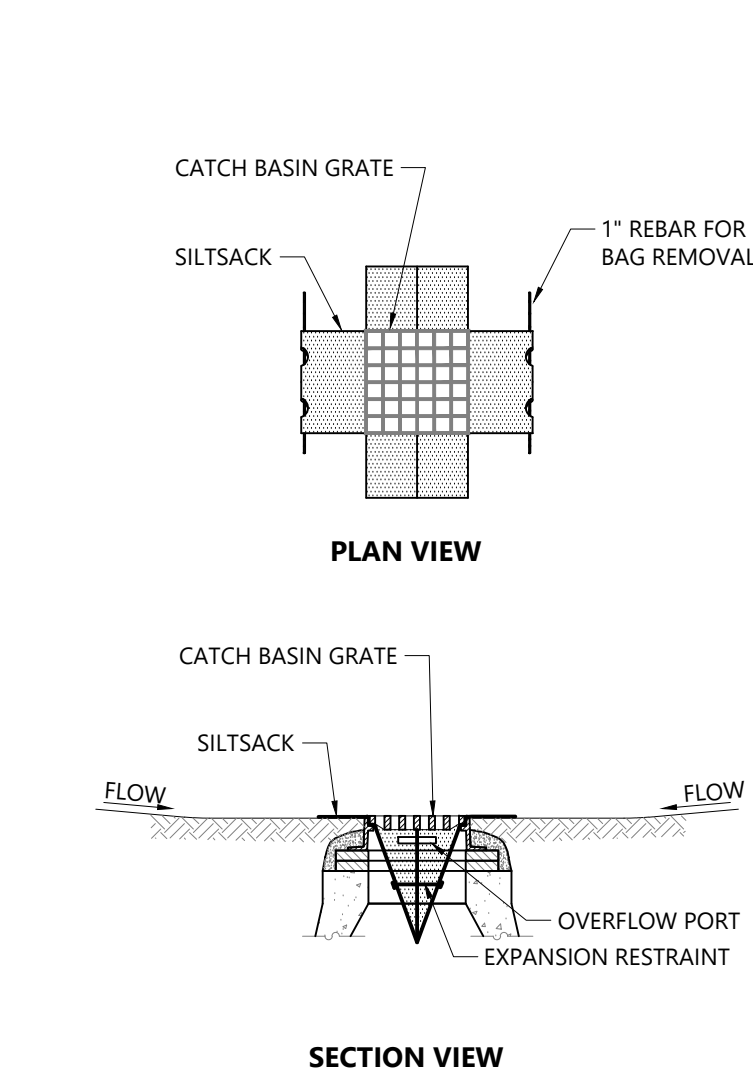
August 22, 2025



C-1

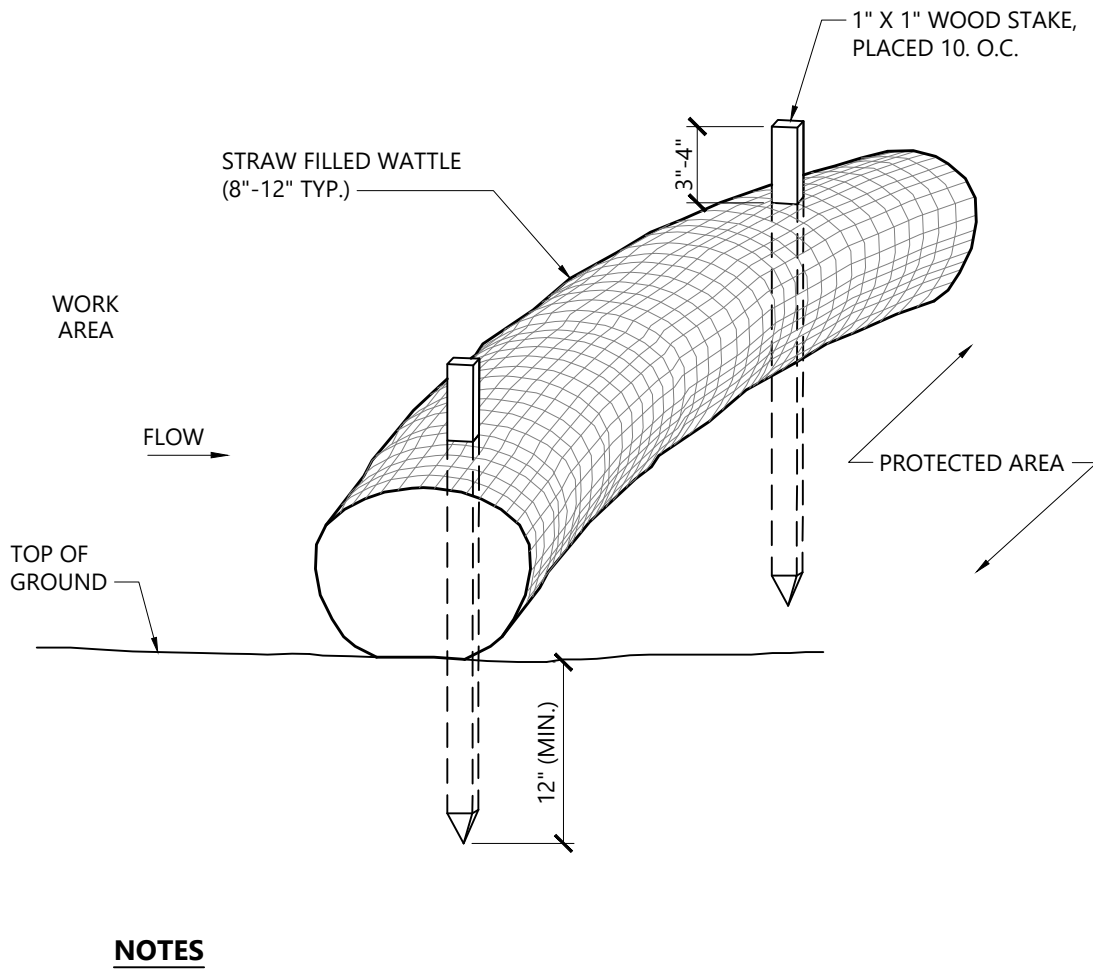
Sheet 1 of 2

Project Number
13346.07



- NOTES**
1. INSTALL SILTSACK IN ALL CATCH BASINS WHERE INDICATED ON THE PLAN BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER BINDER COURSE IS PLACED AND STRAW BALES HAVE BEEN REMOVED.
 2. GRATE TO BE PLACED OVER SILTSACK.
 3. SILTSACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED

Siltsack Sediment Trap 1/20
N.T.S. Source: VHB LD_674



- NOTES**
1. STRAW WATTLE SHALL BE AS MANUFACTURED BY EARTHSAVER OR APPROVED EQUAL.
 2. STRAW WATTLES SHALL OVERLAP A MINIMUM OF 12 INCHES.
 3. STRAW WATTLE SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.
 4. TEMPORARY STRAW WATTLES TO BE REMOVED BY CONTRACTOR. ALL OTHERS TO REMAIN IN PLACE UNLESS DIRECTED OTHERWISE BY ENGINEER.
 5. IF NON BIODEGRADABLE NETTING IS USED THE NETTING SHALL BE COLLECTED AND DISPOSED OF OFFSITE.

Straw Wattle - Erosion Control Barrier 1/20
N.T.S. Source: VHB LD_659

40 Park Avenue

Arlington, MA			
No.	Revision	Date	Appvd.
1	Response to Engineering	10/22/2025	
Designed by		Checked by	
		NJS	
Issued for		Date	
Notice of Intent		August 22, 2025	

Drawing Title

Details

Drawing Number

C-2

Sheet 2 of 2

Project Number 13346.07

SEAL

COMMONWEALTH OF MASSACHUSETTS

NICHOLAS J. SKOLY

CIVIL

No. 52677

MASS. REG. PROFESSIONAL ENGINEER